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THE PENNSYLVANIA BEEKEEPER

Official Organ of the Pennsylvania State Beekeepers' Association. Published Quarterly. Membership and Subscription Price inclusive \$1.00

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MINUTES OF THE THIRTY-THIRD ANNUAL MEETING OF PENNSYLVANIA STATE BEEKEEPERS ASSOCIATION

JANUARY 22nd, 23rd, 1936

WEDNESDAY, JANUARY 22nd, 1936—MORNING

The Meeting was called to order at 9:45 A. M. by the President, Mr. Edwin J. Anderson, who introduced the Hon. J. Hansell French, Secretary of Agriculture, Mr. French welcomed the Beekeepers to the Farm Show, and commended Mr. A. T. Keil and others for their fine work.

He said beekeeping was of value not only for the financial returns, but also for the pollination of field crops, that beekeepers are interested in the Penna. Bee Laws and were co-operating with the inspection service, and that beekeepers are enthusiastic supporters of the State Farm Show. He mentioned that Mr. Gilbert, Commissioner of Agriculture, of Massachusetts, said he had been in every Show in the United States and Canada and had never seen such a wonderful display. Mr. French handed in an Inventory of colonies of bees by Counties as of January 1st, 1935 and honey production for 1934.

Mr. John S. Fleck, President Allegheny County Beekeepers Association, gave the Invocation.

Mr. Howard M. Myers, Ransomville, N. Y., spoke of "Trucking Bees for Pollination." Mr. Myers judged the honey exhibits. He has a large orchard, forty-five frame extractors and is active in beekeeping work in New York State. He thanked the President for the privilege of coming to this great Show. He had no idea of the magnitude of the Pennsylvania State Farm Show. He said he was no better speaker than Judge, but he wanted to assure that he had judged to the best of his ability, he regretted his mistakes, if any.

Mr. Louis H. Hawthorne, of New Castle, was unable to be present, but sent in his paper on "Some Memories" which was read. Mr. Hawthorne helped in getting the Association started in Lawrence County the past year.

Mr. A. T. Keil, Mars, Pa., gave his report as Sec'y-Treas., of the State Association, on motion, seconded it was accepted and ordered placed in our minutes. Mr. Keil inquired if there was not some expenses in connection with the Summer Picnics, and was advised there were none.

Mr. Edwin J. Anderson, chairman of the Publishing Committee "Penna. Beekeeper" gave a report: the Beekeeper during 1935 was much larger than before. The total amount of space sold was \$232.00 for advertising last year. The space sold the year before was \$160. There are 600 to 700 copies of each issue sent out.

Mr. Keil asked that all members get back of the Publishing Committee and send in interesting notes of beekeepers meetings, conditions of colonies, wintering, honey production, etc. We want to hear from all counties of the State.

Mr. Frederick Hahman, Altoona, Pa., suggested having a notice in the Beekeeping Journals of meetings, people close to where meetings are held might attend. Some states have gone together and used the Beekeeping Journals as a medium of notifying of meetings. By getting in more members we will have more money to publish "Penna. Beekeeper."

Mr. F. W. Gravely, Manager of the A. I. Root Co., in New York City, was introduced. He said he was interested in this Farm Show. The death of Mr. Swanson, of Philadelphia, who died in July, was the reason the Philadelphia office has been closed and consolidated with the New York office. Mr. Swanson had been located in Philadelphia for ten years. Although they are not planning to open the Philadelphia office, they do have dealers throughout the State. He spoke of the appealing Valleys in Eastern Pennsylvania and wonderful farm country. Eastern Pennsylvania has a wonderful market at it's door.

Mr. Thomas A. Berkey, of Easton, Penna., President of the Lehigh Valley Beekeepers' Association, was introduced. This Association represents two counties, Lehigh and Northampton, which is good territory for beekeeping. This Association endeavors to co-operate with the State Organization. During the past year, due to the curtailment of State funds there was need to augment the funds for inspection. A bill was passed permitting County Commissioners to appropriate from County funds. Our beekeepers expect to avail ourselves of this opportunity. Honey exhibits were prepared for two honey shows—the Nazareth Show and the Lehigh County Fair.

Mr. Charles H. Kohler, President of the York County Beekeepers Association, was introduced. He reports a bad year, eighteen to twenty days of honey flow were lost on account of the rainy season. The latter part of June reminded him of September. He harvested about one-fourth of a crop this year. Last month he had two new customers from bakery concerns. He had always wished to find a way to dispose of dark honey and now is using dark honey in candy.

Rev. H. M. Snively, of Carlisle, Pa., and President of Cumberland County Beekeepers Association, spoke of "The Use of Honey in Bible Times," which was well given. There was some discussion as to whether the Locust and Honey mentioned in the Bible was the Locust of the Grasshopper Family or a locust bean, which it is stated are very sweet. There are many beekeepers in Palestine at the present time.

Mr. Holcomb, the inspector from New Jersey, who is taking Mr. Elmer Carr's place was introduced. This was his first trip to a Penna. meeting.

Announcements and Questions. President advised of a slight difference in program due to some speakers not being present.

COMMITTEES APPOINTED BY PRESIDENT

Auditing Committee: Frederick Hahman, Thomas A. Berkey, Enos H. Hess, Harry B. Kirk.

Resolutions Committee: John S. Fleck, Floyd H. Sandt, Charles H. Hess, Charles H. Kohler, Warren A. Malick and Rev. H. M. Snively.

EXTRACTING AT THE OUT APIARY

By Harry W. Beaver, Troy, Pa.

Mr. President, ladies and gentlemen:

Your secretary wanted me to speak on this topic, which I am taking not,

in defense, or in the sense of promotion of the project. I will tell as briefly as possible how we extract our honey, which I believe is as economical as any other method I could devise. I know the trend is toward the adoption of the central extracting plant, which we all know has a great many things to recommend it. When we began our beekeeping career, the central plant was unknown among commercial beekeepers except where the apiarist had only one apiary, such as E. W. Alexander for instance with his 700 colony apiary. Also quite a few large apiaries in California and Cuba, but there being no easy method of transportation it was necessary to develop a method whereby the honey could be extracted at the apiary where produced. This necessitated an outfit at each apiary, which consisted of an extractor capping can of some sort and a straining tank, together with a supply of kegs or cans which were distributed during the winter when sledding was good. Gradually there came a change. Motor trucks, light weight gasoline engines, power extractors, good roads and gradually central extracting plants with their thousand dollar equipment.

Our equipment for extracting at the outyards consists of an extractor of the radial type, holding 42 frames, regular depth, and a honey pump bolted permanently to a light platform with place to set a small gas engine, a straining tank holding 500 pounds, honey knives, brush, whetstone, water pail, keg of water, stand for straining tank, which holds the five carbolite screens when moving, also two capping barrels to take the cappings home at the end of the job. We have a capping tank at each yard made of wood which has a metal bottom, dimensions four feet long by twenty inches wide by a foot deep with a screen two inches from the bottom and an outlet at one end for drawing off the honey from time to time. It takes fifteen minutes by the clock to unload and set up ready to go.

Three men make up the gang, one to take the honey off and wheel it in, one to uncap and one to run the extractor and can the honey, and help uncapping if necessary.

To take off honey we use as many screens as necessary, two will do in hot weather, while on cold days five are necessary. The screens have a rim two inches deep, same outside dimensions as the hive, and have window screen nailed on, then on top of that several thicknesses of burlap covered with a piece of celotex. The acid is sprinkled on the burlap on the inside, of course, just before using. The cover is removed and the rim placed above the super. Put on several and in a few minutes the super will be ready to remove and the screen is put on the next super down and the next hive is worked likewise, etc. By the time the yard man has the first supers off and wheeled to the extracting house the boys in there are ready to extract, and so we are off to the days work.

The strainer consists of a wire basket lined with cheese cloth which fits down in the tank. Over the top, to catch the coarse particles, is stretched a fine mesh copper screen. We usually extract one yard a day, depending somewhat on the amount of honey.

A good days work will take care of a ton and a quarter to a ton and a half without anyone working very hard and we can remove from the hives and extract over two tons if there happens to be that much at one yard.

This is a short description of the way we do it. Of course there are many details that have to be worked out to suit the beekeeper. We think we can extract at the outyard with less work and expense than to have a central plant, for the reason that there is less handling of supers, less hauling and the honey is warm except some seasons when the weather is cold the latter part of September like it was last year. When a yard is finished we load the honey on the truck and take it home leaving the outfit at the yard and pick it up next day and take it to the next yard. The cappings are taken along home and extracted and put out into the solar and melted up next day (if the sun shines). The honey from the solar extractor is sold as off grade honey as it has a somewhat waxy flavor, this goes to bakers and other uses where flavor does not make so much difference as price. Of course, as I said in the beginning, the central

plant has some advantages that we have not, but not enough that I can see to make the change.

Q. When extracting are you sometimes bothered by robber bees?

A. By the carbotic method of taking off honey they do not rob as much. Just set out a few combs as a time, very little robbing. Bees are examined early in the spring for disease.

Q. How do you wash your hands and equipment when extracting at out-yards?

A. We use a fourteen gallon honey barrel. It is filled with water at the house and carried along.

Q. Do you make any inspection for disease?

A. We go over the bees every two weeks. We don't let the bees get rotten before we call them foul brooders. One cell condemns a colony.

Q. Do you extract once or twice a year. A. Twice a year.

Q. Do you extract and place back on the same hives? A. No.

TRUCKING BEES FOR POLLINATION

By H. M. Myers

The moving of bees into orchards during the blossoming period for purposes of Pollination is a business that has developed largely into commercial importance during the past decade. Although considerable work of this nature was done in New Jersey and some of the other States in an experimental way preceding this period. Now and for considerable time past the period of elemental experimentation is passed and the practice is becoming an established necessity in the successful production of apples and other fruits in localities where they are grown in commercial quantities. We may reasonably expect a growing demand for bees for this purpose. There is probably no other single practice more profitable to the fruit grower. For without a good set of fruit there is no chance for the grower to make a profit.

Of course there are many small orchards and local conditions where there are normally sufficient wild insects and bees to accomplish pollination and where the importation of bees would only be profitable in seasons of extreme scarcity of natural insect population.

I believe the first bees we ever put out in orchards for pay was about the year 1924 when two customers ordered a total of 30 colonies. We delivered 10 to one at \$3.00 per and 20 to another for \$50.00 or a total rental of \$80.00 income from this source.

Last Spring, 1935, we serviced 55 growers with a total of about 900 colonies of bees.

Being commercially interested in fruit growing ourselves, we have a fair view of the work from the Fruit Grower's standpoint, as well as the Beekeepers. Profits from fruit for the past several years have been very low and in many cases entirely lacking and many times loss. We have purposely tried to carry on this service at as low a price level as possible and be profitable to the beekeeper and fruit grower alike. To be profitable to the fruit grower the bees must be in his orchard at the proper time. Colonies must be strong enough to deliver the goods. Strength of colonies is the most essential factor in the whole practice from the fruit growers standpoint. One strong colony boiling over with bees will put more workers out among the blossoms at each opportunity than a dozen weak ones. The number of worker bees, of field age, ready to rush out in great numbers at every suitable occasion is the thing that counts.

The beekeeper must receive enough rental to fully compensate for his expenses, risks, labor, damage to his bees and return a fair net profit. And if he

is to stay in the business the rental must be low enough that his customer, the grower, finds it economical to use his service rather than to embark into bee-keeping to obtain his pollination.

On the beekeepers ability to organize and simplify his work and eliminate losses and risks will largely depend his success. I do not believe that any one has yet reached anything like perfection in this work yet. I know that personally we are still far from that goal. Our lack of uniformity in equipment is one of our greatest drawbacks to cheap, efficient moving of bees. There are also other matters in which we are very inefficient, but they are not so conspicuous and if they are not mentioned may be unnoticed.

Shortly after unpacking we make a thorough examination of each colony. Being extremely careful to detect any disease and to note the condition and amount of brood and stores.

The date of inspection and the number of frames of brood are marked on the cover of each hive and any other matter or condition of special importance is noted. Such as failing queens, etc. We want every colony to have at least ten pounds of stores as they are using enormous quantities of stores, maintaining brood rearing at this time and a few rainy or cold days with scant food supplies may result in severe curtailment of brood rearing or possible starvation.

Colonies with the equal of six and more frames of brood are considered very suitable for pollination purposes. Altho some springs when there is a shortage of pollen up to fruit blooming time, some good strong colonies maintaining 5 or 6 pounds of bees will not have over four or five frames of brood and in such seasons these colonies are used. When the pollen becomes available from fruit these colonies will have several more frames of brood in a very short time, and will send out more field bees for the first few days than do colonies with more brood and the same number of bees.

A lot of hard work is involved in moving several hundred colonies of bees in the orchards and out again. In 1935 the first colonies were trucked out to the orchards on May 13th, the last went May 28th, and the very next day, or May 29th, we started removing the first put out. Our locality is exceptionally favorable for the work as blooming period is distributed over a rather long period, there being a difference of several days on the same. Varieties from the warm zone along the Ridge Road near the Niagara Escarpment to the cool or late zone along Lake Ontario. Unfortunately, however, most of the work is along the Lake Ontario zone and has to be done within a few days. I would say that at least 4-5 of all the work we do is within two miles of the lake. In this cool section there seems to be the greatest scarcity of insects and also the largest settings of apples, it is here that the most notable results are obtained by the importation of bees.

In preparing for the actual moving, we have tried many methods of screening, such as screens; over the top, top and entrances, entrances only, we have tried moving bees with the entrances stuffed, and entrances left open, and have never lost a colony from suffocation. We try so far as possible to move during the cool parts of the day and at night.

For trucking short distances in cool weather simply stuffing up the entrances with cotton batten, or even old rags or grass is satisfactory. Moving with open entrances has proven unsatisfactory with us. There is always more or less loss of bees flying out. Some hives become covered with bees and are hard to handle. And there are always more stings.

When we first began the work we used top screens with an inch clustering space between the screen and the top bars, and also a piece of screen in the entrance. With this arrangement we seemed to have considerable damage to and loss of brood. For the past four or five years we have standardized on an entrance screen made about six inches high, two inches thick and the width of the hive. The top is made of thin lumber, the ends of 3-4 inch and the front of screen. The bottom board of the hive serves as a bottom for the screen.

Each end is drilled with a 1-8 inch hole through which an eight penny nail is slipped and driven into the front of the hive when screen is in place. This is quickly applied and is cheap to make. The bottom board cover and super are fastened with two inch crate staples. There being no disturbance to the hive of bees except the nailing on of the entrance screen. This screen provides a large clustering space for the bees on the outside of the entrance. They seem to show the least damage of any method. Last Spring one load of 100 colonies were moved a distance of 260 miles each way to and from the orchards and made just as good a record in honey production as bees from the same yard that were not moved at all. However, these bees were only in the orchard eight days during full bloom and there was no poisoning noticeable. They were stripped of most of the brood before they were taken to the orchard, which lessened the damage to brood.

There seems to be considerable loss of certain ages of brood in any considerable move, probably caused by jarring loose in the cells or from neglect by the nurse bees.

These 100 colonies referred to above were borrowed from a friend from the eastern part of the State and he thought that the stimulus from the fruit bloom flow would more than overcome the setback from moving and the stripping of some of the brood. This is most unusual though in our experience as usually the small swarms that are considered too weak for use and left in the yards will build up and give a better surplus crop than the big strong colonies that were used for the orchards. Incidental poisoning we believe to be the chief cause of loss.

Poisoning of bees is a serious problem. Losses from this cause have been severe over a term of years. Thanks to the educational work of the Agricultural schools and the Farm Bureaus. Growers are becoming more careful, but the trouble and losses are still real great and I fear will never be eliminated.

With the ever growing use of insecticides the scattering of tons upon tons of poison by both liquid and dust applications there is an ever present danger.

It is possible in neighborhoods where every fruit grower is of the enlightened, progressive and careful type to use bees for pollination and even keep bees the year around without much danger of severe poisoning. But if some one in the great rush of work, incident to a thorough spraying program, gets behind or ahead in his applications serious results are almost sure to follow for the bees.

Poisoning from a delayed pink application is especially a severe loss to the fruit grower as the bees are killed before they have had a chance to work on the bloom.

Where the poisoning occurs from the Cayley application the loss is mostly to the beekeeper. As the bees have already performed duty of fecundity for the fruit.

As previously mentioned our equipment is not all of one kind. We are using several hundred each of standard 10 frame Modified Dadant, 8 frame and 13 frame square hives. And, after using this diversified assortment for many years, I do not yet know just what hive I like best. Each seem to have advantages of their own. The 10 frame are mostly used 1 and 1-2 story and probably for most purposes is the best. Eight frame is used 2 story and M. D. and 13 are used one story.

For distributing in the orchards a small Ford truck of the pick-up type is used.

Small orders are handled by one man. Where large orders and long distant orders are involved, both a large and small truck are used. The big truck does not attempt to go through the orchards usually but is left standing with the motor running and the bees are re-loaded onto the pick-up and distributed.

We consider it very important that any vehicle loaded with bees be kept

in motion as much as possible, and if it is necessary to stand the motor should be kept running to provide as much vibration as possible. For while there is movement or sufficient vibration bees will cling together on the combs and will not worry, or at least will not show their worrying by running around trying to get out.

The placing and distributing of the bees in the orchards vary somewhat according to local conditions and the ideas of individual growers. Details in this are not of major importance. The profuse secretion of nectar, the odor of the blossoms and the protection from cold winds are the chief influences attracting bees to blossoms rather than the distance the hives are placed from the blossoms.

However, the range of flight of honey bees is much less during cool, catchy Spring weather, than it is during more settled warm weather. It is not safe to depend on a flight of more than a quarter of a mile during this time.

The setting of the hives in protected warm places where they will receive the maximum hours of sunshine so as to insure the bees getting out quickly at each opportunity and work in warmer parts of the orchard is much more desirable than the regular placing of so many hives to an acre. Proof of this can be observed in any bee yard in the early Spring where there are varying conditions. As those colonies protected from the wind and in the sun will show much more flight than those in the shade and exposed. For my own orchards I would rather have a dozen colonies situated in a good warm protected spot, near the center of the orchard, than to have twice as many scattered through the orchard in exposed situations. However, a rather even distribution throughout the orchard is to be preferred to grouping unless there are decided advantages in the way of protection for the groups. Bees do not fly long distances. By choice they will go just far enough to gather their load most economically, and except possibly for some bees continually scouting for better pasturage, will confine their work near the hives. If the scouts should find more and freer nectar secretion some distance from the hives, the whole working force will forthwith go to the easier picking. And in some such cases entirely neglect the work for which they were put into the orchard.

In some cases where it is very difficult to get a set of fruit it possibly is caused by other varieties in the neighborhood being so much more attractive that they draw all the bees away from the particular variety. In such cases the only remedy would seem to be that of using such an abundance of bees that the easy picking would be all wiped up and the bees forced to visit the less productive bloom in search of supplies.

Altogether the servicing of bees for pollination is a very particular and timely operation. The growers demand, and to be of use must have, an almost to the minute service. A rather intensive spray program is carried on almost to the opening of the first bloom and bees should not be placed before this pre-blossom spraying is completed. Then at the falling of the petals another spraying is commenced, and the quicker the bees are removed the better it is for them. As the few remaining blossoms are sure to receive poison applications and the bees are certain to visit these scattered blossoms in great numbers and sometimes they will pick up enough poison to practically wipe out the entire colony. In some cases enough poisoned pollen is carried home into the hive as to produce a slow poisoning effect for weeks after.

It is considerable more work to gather the bees up from the orchard and return them to their summer locations than it is to distribute them through the orchards. When taking them to the orchards they are in the yards where they can be screened and loaded in comparatively short time early in the morning or in the evening when the bees are not flying, and distributed through the orchards either at night or daytime as required. It is quite different when it comes time to get them out, there is only a few hours each day when it is possible to find the hives when the bees are not flying and screen them. The grower is usually busy with his spraying or is harder to find than are the bees.

The bees are usually scattered out about one to an acre of orchard and the orchards are so dense that it is difficult to see beyond the next tree. And it is some job to gather up screen and remove several hundred colonies of bees scattered out about one in a place over two counties of orchards.

After all we feel that it is a worthwhile project.

The actual expense per colony for labor involved in moving and for gasoline tires, etc., is probably not much over 75 cents per colony. The wear and tear on the equipment and the use of some extra material, such as special screens, together with the damage to the bees and risk in moving, etc., should constitute most of the other overhead expenses.

When we consider the average yields of honey and the cost of its production, storing, packing, etc., it seems that pollination at three to four dollars per colony compares quite favorably.

And then when we further consider that ordinarily we may expect about half as much of a crop from them as tho they had not been disturbed and in good seasons, where but little poisoning is incurred we probably secure 90 p. c. as much honey, it seems that it may amount to a considerable part of many beekeepers income in the future.

DISCUSSION: PREFERENCE OF BEES TO SOME FRUIT BLOOM MORE THAN OTHERS

Maiden Blush Apples for Instance are always full of bees

Q. Do you move unsealed Brood? Yes, usually.

Q. Does sealed brood suffer from a move as much as unsealed?

A. Little loss of sealed brood. Unsealed loss from neglect by nurse bees.

Q. Does heat do more damage than cold? A. Yes.

Q. How far do you move the bees? A. A couple miles to 200.

Q. Is it better to put bees in clusters than scatter them out?

A. Rather have them not scattered.

Q. Would that type of screen be suitable in all weather? (Large entrance screen).

A. No top screen is added in warm weather.

Q. What do you get for pollination of orchards?

A. Three or four dollars per colony.

Q. Who pays the transportation?

A. We do.

Q. How many colonies do you average for pollinating an orchard?

A. One of the best fruit growers who owns twenty acres of McIntosh uses one colony to the acre.

Q. Do you find that the trees nearest the bees are better pollinated?

A. I found that the side nearest the bees was better loaded.

Mr. Hess: A man near Shippensburg who owns several acres of trees, takes colonies into those in bloom and then moves the bees to trees which are in need of pollination. He found that the trees near the truck of bees were loaded near the bottom, but that at a little distance, the trees were fuller of apples near the top of the trees. Apparently the pollen remained upon the bodies of the bees for several days.

Dr. Phillips told of the man who had bushes near the hive which he sprinkled with pollen, so that it brushed the bees as they would leave the hive. He said there are thousands of colonies shipped to Europe from Germany by placing them in combs with a small amount of honey.

WEDNESDAY AFTERNOON SECRETARY-TREASURER'S REPORT

As of January 16th, 1936

A. T. Keil

The Sec'y-Treas. in giving his report said he was not satisfied with the number of members in the State Beekeepers Association. There are thousands and thousands of beekeepers in Pennsylvania but no more than 312 have joined the Association. What are the non-member beekeepers doing, sitting back and letting "George Do It?" This year we have 312 members, doubling the previous record of 150 members, which was double the record of the previous year of 70 members. We are getting somewhere but not fast enough.

CASH RECEIPTS—1935

2 U. S. Bonds 88347-H 88348-J	\$2,000.00	
Savings Account	185.56	
Dues (312 Members)	188.50	
Interest U. S. Bonds	62.50	
Interest Savings Account	4.77	
Bee Journals	28.00	
From Publishing Committee	182.25	
Cash in Bank January 18, 1935	90.29	\$2,741.87

CASH DISBURSEMENTS 1935

Publication January	\$ 49.81	
Publication April	77.38	
Publication July	80.71	
Publication October	62.25	
Publication Envelopes for Mailing	8.51	
Stationery and Postage	77.74	
Bee Journals, Cleared to Publisher	28.00	
Surety Bond \$2,500	6.25	
Banquet 1935	7.00	
Badges	5.15	
American Honey Inst.	5.00	
Allen Latham, Speaker 1935	41.28	
Steno. Jan. Annual Meeting	10.83	
Dues State Council Agr. Assocs.	2.00	
Membership Postals	2.50	
Overpaid on dues	2.00	
Badges for 1936	10.75	
U. S. Bonds—2	2,000.00	
Savings Account	185.56	
Cash in Bank January 14th, 1936	79.15	\$2,741.87

WEDNESDAY AFTERNOON

Election of Officers: Mr. H. M. Snively nominated for President, moved nominations be closed. Edwin J. Anderson for Vice-President, nominated, motion moved and seconded nominations be closed. A. T. Keil, Sec'y-Treas. moved and seconded nominations be closed. There being no ballot necessary the officers were unanimously elected.

Mr. John S. Fleck, of Pittsburgh, talked on "What the Individual Beekeeper Can Do To Advertise Honey." He said the honey production last year in Pennsylvania was worth one half million dollars, and twice that amount is going to waste on account of not being gathered.

Mr. Harry B. Kirk, Apiculturist, Penna. Dept. of Agr. gave report of Apiary Inspection in Penna. Commented on the large honey exhibit. Many people said it was the largest honey exhibit they had ever seen.

Mr. R. H. Bell, Director of the Bureau of Plant Industry said he had received many valuable suggestions and ideas. The question has been raised "How would we co-operate with Counties in Apiary Inspection Work." There is no additional money as yet, but we are looking ahead.

PRESIDENT'S ADDRESS

Edwin J. Anderson

The statement can justly be made that beekeeping conditions in Pennsylvania have improved during the past few years. This is especially true of our honey markets. Honey has been advertised in various papers and magazines both by the beekeepers and the American Honey Institute and as a result the public is beginning to learn something of the valuable properties of honey. Honey and bees are the subjects of various radio and service club talks. Honey is used more each year by the bakers and candy makers so that its use is increasing more rapidly than the production. The increase in consumption has caused the wholesale price to advance gradually during the past two or three seasons. This is a wholesome condition so long as the price of honey does not increase to such a point that bakers and others are encouraged to use substitutes for honey. If beekeepers wish to maintain these favorable conditions they will have to continue to advertise honey and supply the demand created. The immense markets of Pennsylvania undoubtedly offer a wide and valuable field for honey advertising.

Another sign of improvement is the excellent form in which both comb and extracted honey are placed on the market by many of our beekeepers. Honey houses and bottling plants are being built in different sections of the state. These plants are now equipped in such a way that a very high quality honey is offered the public. The honey packed in these plants is largely clear and free from foreign material, and it is heated, liquified and bottled without being overheated or burnt. Improvement in this phase of beekeeping is very important since nearly all of the honey produced in Pennsylvania is sold direct to the store or the customer.

Our Association has developed during the past few years as is indicated by our membership which has increased from about one hundred to over three hundred. This is the largest paid-up membership in the history of the Association. The Pennsylvania Beekeeper has increased in size so that the four issues published during April, July and October of 1935 and January 1936 were the largest ever. The advertising space sold in the Pennsylvania Beekeeper was about \$30.00 greater than for the previous year.

Other signs of growth could be mentioned if space permitted. We should add, however, that we hope to see this growth continue indefinitely in the future so that beekeeping in Pennsylvania will occupy the position it should.

WHAT THE INDIVIDUAL BEEKEEPER CAN DO TO ADVERTISE HONEY

By John S. Fleck

Honey, the finest of all sweets, should only need to have people know of its goodness and value as a natural sweet, and its energizing properties to encourage more use of it. Honey ranks as one of our most wholesome foods. It comes in the class of fuel producing foods like sugar, which furnish energy to

the system, rather than flesh and bone. It ranks far above steak, potatoes or bread in this respect.

First. One should know as much as possible about honey, how it is made and the best uses as food. One should know the delicious flavors of honey and use it regularly, it should be on the table as regularly as butter. Persons eating at hotels and restaurants should ask for honey if it is not being served. This suggestion came from one of the Bee Journals many years ago, and in actual experience I have found few eating places serving honey unless requested and usually at an additional cost. As an instance, in a Buffalo restaurant last October we paid thirty cents additional for honey for hot cakes, served of course in an individual jar. On dining cars honey is used only as requested. I think one very effective way to advertise honey, is for all of us who really like honey to call for it at hotels, restaurants and dining cars, and if it is not available it will at least give one an opportunity to bring it to the attention of the restaurant keeper or steward, and get before him the fact that many people do like honey.

An interesting subject of conversation is honey and its uses, which leads to Beekeeping and almost every one is interested in the workings of the Bees and the production of honey. In order to make the conversation interesting, one must know how the honey is produced and have a fair knowledge of the workings of the Busy Bee.

I think one of the best ways an individual can advertise honey, is to talk honey every time there is an opportunity.

Another way is the publishing of recipes for uses of honey. The American Honey Institute has done a great deal in the way of distributing good recipes for uses of honey in cooking and baking. At our County Farm Show we have handed out a large number of printed recipes received from American Honey Institute, Kellogg Company and from other sources. Some time ago I read an article in one of the Bee Journals showing the value of publishing recipes for uses of honey, in local newspapers which indicated that very effective advertising was accomplished in this way, and is generally welcomed by publishers.

The Root Company has gone back into the business of packing honey in glass under trade name "Root Quality" after being out of retailing honey for several years. One of their first methods of advertising honey, was to give out about fifty thousand samples at a Cleveland food show last year. Two young ladies handed out samples of extracted honey on butter wafers during the period of the show. About 250 pounds of honey and fifty dozen boxes of crackers were distributed. They also had two observation hives of bees on display which attracted attention.

Facts about bees and honey were distributed by word of mouth and in printed folders. Our industry needs more honey and bee displays and more sampling of honey. The larger grocery stores in a community are very willing to co-operate in such advertising.

Sampling accomplishes more than any advertising. It removes all doubt as to quality of the honey. It develops satisfied customers.

REPORT OF APIARY INSPECTION IN PENNSYLVANIA—1935

H. B. Kirk

The usual "area clean-up" plan of apiary inspection was carried on in the state this past season. Initial inspection was conducted in nine counties and "follow-up" inspection in fifteen counties.

Eight inspectors were employed representing eighty-five inspection weeks,

and 23,118 colonies of bees were inspected. This number represents about one-half of the average number of colonies inspected in 1930-31 and 1932, and somewhat less than the average number per inspector in 1933 and 1934.

One of the outstanding events of the year was the prosecuting of one of our deputy inspectors for arson (burning diseased bees). These bees were inspected in 1934 and the customary notice was given to treat or destroy. This notice was signed by the beekeeper and returned to the office of the Bureau of Plant Industry stating that the disease had been disposed of. During our regular spring inspection these bees were found to be badly diseased and the combs black, showing that no treatment had been given to them.

Instead of prosecuting the beekeeper, the bees were burned and the bee inspector was later prosecuted and a claim made for damages. The indictment was finally quashed and no damages were paid.

Due to the financial condition of many beekeepers, considerable leniency has been shown to the beekeepers the past few years and consequently fewer prosecutions were made. Then too, a considerable portion of the state had not been covered with a very thorough inspection and it was thought advisable not to be too hard on the beekeepers until they thoroughly understood the requirements of the Pennsylvania Bee Law. Many beekeepers have taken advantage of our leniency and have depended entirely on the bee inspector to treat or destroy their bees rather than make any attempt to do the work themselves. I, therefore, specifically recommend that if a beekeeper has been notified of any diseased or illegal hive condition and that if he does not comply with the requirements of the notice in the 14-day period, that he be prosecuted and made to take care of the treatment or destruction of the bees himself. I do not know of a single case where a beekeeper has been prosecuted that he did not take care of his bees very shortly thereafter.

I am convinced that the above mentioned requirements have been well advertised as prosecutions have been made in almost every county some time during the past eight years and I recommend, in the future, the strict enforcement of the Pennsylvania Bee Law.

To control bee diseases more effectively, there are several governing factors to consider; the part the average beekeeper plays; the part the bee organization plays and the part the inspection service plays.

While the majority of beekeepers are favorable to our inspection service, quite a number do not make periodical inspections to determine the presence of disease and, consequently, do not discover it until it is far advanced. Every beekeeper must become his own inspector if we hope to control American foul brood.

It has been proven what an important part bee organizations play in bettering our apiary problems. This past season one of the county organizations was responsible for having the state law changed to make lawful the appropriations of funds by county commissioners for apiary inspection. We will, no doubt, see the results of this change this coming season. The state organization was likewise responsible for laying before the present administration, some of our bee problems and the importance of beekeeping in the state.

The part the inspection service plays has been discussed many times at our annual meetings. A number of improvements have been made from time to time and the Bureau of Plant Industry is always willing to receive any suggestions that will tend to make the inspection work more effective.

An effort should be made to contact the Secretary of Agriculture and get sufficient funds so we can employ at least fifteen deputy inspectors, and at the same time a continued effort should be made to have the various county commissioners furnish a sufficient amount to employ fifteen additional inspectors. If this could be accomplished, the state could be covered every other year and

consequently, disease could be reduced to such an extent that very few colonies would have to be burned.

The above plan of trying to secure funds to employ a total of thirty inspectors this coming season, is not at all impossible, and we should all make every effort to assist in some way to put on a real inspection program this season.

If the County appropriates sufficient money to pay an inspector, we will deputize him, furnish forms and care for follow-up work and for prosecutions. In some counties we will continue to do work as at the present time. The prosecutions are growing less each year. This year there were only two prosecutions, 3500 apiaries were inspected.

Mr. Borecki, who is inspector in Carbon County, was introduced.

Dr. E. F. Phillips, Prof. of Apiculture, Cornell University, Ithaca, N. Y., spoke on "The Grading of Honey for Color." As this was the first Association to which he belonged he was very glad to come to speak with the Beekeepers of Pennsylvania.

Mr. Filmore, in research work for New Jersey, was introduced.

Announcements—Mr. Anderson, Dues—Banquet this Eve.

Mr. Keil. Badges for all members. Oct. and Jan. issues of Penna. Beekeeper on desk. Resolutions Committee, Thursday at 9:30 A. M.

Adjournment.

Beekeepers Banquet—Domestic Science Kitchen, Johnstons Restaurant, 206 Walnut Street, Harrisburg, Pa.

Forty-three (43) were at this Banquet, the best we have had so far, and pleased to note many lady beekeepers present.

Remarks from D. C. Babcock, Representing The A. I. Root Co., E. J. Anderson and others.

The talk by Prof. E. F. Phillips, "Visiting Beekeepers in Central Europe," was very interesting and instructive, mostly describing conditions of beekeeping in Germany, how they keep records of the honey flow, etc.

We were pleasantly surprised to have extra items on our Menu, Brother Sandt furnished the "Honey Butter" and Brother Kohler candy made with honey, both were delicious and easy to take.

USES OF BEESWAX

By Jerre C. Frazer

In Charge of G. B. Lewis Co., Wheeling, W. Virginia

Honey and Beeswax were used in prehistoric days. Beeswax is not used as food and for this reason it is harder to find early reference to it.

In the Psalms of David wax is referred to several times. This had reference to beeswax because it was the only known wax at the time. The references are "The heart melteth as wax." "The mountains melt like wax in the presence of the Lord. Now if the use of wax was so familiar with the children of Israel that they could use it as a simile in songs then it stands to reason that they used beeswax in their daily lives. Of course this is just my opinion and according to my wife I have been wrong more than once.

In Greek Mythology many references are made to the use of wax or bees-

wax. Daedalus, the Aethenian made some wings of feathers and wax and flew away with his son, Icarus, after he had killed his nephew. Icarus flew too near the sun and the wax wings melted so Icarus fell in the Aegean Sea and was drowned. Daedalus, alighted at Camas in Italy and built a temple to Apollo.

The Greeks, Romans and the Phoenicians knew of beeswax and its use. These ancients used wax covered tablets for their correspondence. They used wax covered boards.

In the fourth century we find where wax candles were used in the church services at Easter time. These Pascal candles were blessed and burned during the Easter services and the remaining part of the candles were taken to the homes for private use of the worshipers. A little later the wax profiles and masks became popular. Some of the first masks and portraits made of beeswax were those of Louis, the 14th, of France, Ann of Austria, and James, the Second, of England. This was during the years of around 1350 to 1646. During this time witch craft flourished and it was the custom of witches to make wax profiles of their victims so as to more easily scare them into submission.

Beeswax is a fatty wax produced by the bees. The honeybees eat the honey and in a few hours it undergoes a complete chemical change in the stomach of the bees. The wax comes out in the form of tiny scales and these scales come out of small openings in their abdomens.

Beeswax has a specific gravity of about 960 to 967 and a melting point of 143 to 197 degrees. It is composed of 17 per cent. cerotic acid, 86 to 89 per cent. Myricine, with a trace of creoline, and 80 per cent. carbon, 13 per cent. hydrogen, and 7 per cent. oxygen.

How much beeswax is produced in a year in the United States? Even the old-time beekeeper would be startled to know the large quantity produced in the U. S. annually. It is almost impossible to obtain this information. From three to five million pounds, according to the Governmental figures are imported into this country every year. It has been estimated that from 3 to 6 million pounds of beeswax are produced in U. S. every year.

The average beekeeper thinks that most of our beeswax is used for foundation combs, but he is far from being correct, in all probability not over one million pounds are used in the manufacture of beecomb foundation. This means that most of our domestic wax, and not counting the imported wax, is used in other industries.

In the earlier years the industry had to use beeswax because there was no other wax for them to use, but in recent years paraffine and other oil waxes have been manufactured in such large quantities that they make beeswax look like a small fish in a large pond.

Government reports give an estimate of 27 millions of pounds of all waxes were reported in the U. S. in 1925. Our domestic production of paraffine waxes must be enormous because 200 million pounds have been exported in a single year. It has been estimated that around 100 million pounds of these waxes are produced in this country yearly.

This shows us they have to a greater or less degree replaced beeswax on the trades, which is a good thing because beeswax could not have kept up with this demand.

Church candles were originally made of pure beeswax. Scarcity of beeswax and cheapness of the other waxes has led to substitutions. Candles for lighting, as a rule, contain little or no beeswax, while sacramental candles contain little or no beeswax, while sacramental candles contain from 50 to 100 per cent. This means that doubtless the candle maker uses the larger part of beeswax produced in our country.

In very recent years the churches are going back, or at least are showing a

tendency to go back to the use of candles made from pure beeswax. These candles are more expensive but this expense is offset by the fact that the pure beeswax candles do not make as much smoke as the other candles do. The church walls will not have to be redecorated so often.

What about the future of beeswax? With all of these cheaper waxes on the market one often wonders if beeswax will not be a drug on the market. The chances are that beeswax is now at its very lowest price because in spite of all of the cheaper waxes there has always been a market for beeswax. It has been able to hold its own better than most agricultural products have held their prices.

When compared to other waxes, beeswax is really small potatoes and so, it cannot take up much bulk in the different products. It looks as if the industries use beeswax when they are not able to find a substitute for it at a cheaper price. So we can see that there is very little danger for beeswax being a drug on the market.

Another reason for being optimistic as to the future of beeswax is that when we lose a market for a commodity we always find another market. Many old-time livery stables have been converted into garages. If every beekeeper supported the American Honey Institute they would be able to find new uses for our wax.

Another good example of where you lose a market for a commodity and find a greater demand for it in another industry. Lets consider cosmetics as one of the new demands for our wax. In all probability candle making uses the greatest amount of our beeswax, then the manufacturing of bee comb foundation would probably be the second in the amount used, and third on the list would be cosmetics. Aren't you surprised, well I was when I discovered this to be true. A good cold cream contains from 8 to 15 per cent. beeswax. A small jar of cold cream would not appear to contain sufficient beeswax to make any difference, but think of the thousand of brands on the market. It looks as if all wisdom can sooner or later be traced to China. We invent things over here and discover that China used the same thing centuries ago. It is the same thing with the use of beeswax on the face to make it beautiful and soft. The Chinese women would boil wax and would hold their faces over it so that the vapor from the wax would get on their faces. They were very careful to keep the wax fumes out of their hair. So the heathen women of China certainly started something when they began teaching their Christian sisters, "What Price Beauty." If you are a man and are blessed or otherwise with a nice mustache and you use wax on it then you are helping our industry so continue to make your misplaced eyebrows stiffer and stiffer with our wax. Shaving paste has a small amount of beeswax in it.

The dentists use pure beeswax in a bite-wax and it is used in connection with other waxes for impression wax.

Most of the polishes for floors, furniture, automobiles, shoes, leather, buttons and stoves require more or less beeswax in their formulae.

Foundarys use beeswax in making small castings, in the shape of round or triangular fittings for rounding the corners of large castings and in sheeted form for various purposes.

Wax molding, wax figures, wax flowers are now using larger amounts of beeswax.

Beeswax is used in a wax for tree grafting.

Beeswax is an ingredient in iron wax, in waxed thread, and in the preparation and preservation of skins and leathers.

It is also used in insulating wax, in cements for stopping leaks, setting bristles, and for sealing wax. Colored crayons have beeswax in them.

In the Miller Memorial Library at Madison, Wisc., there is a book called Cowan's Waxcraft, which tells of 110 uses of beeswax, but this book is quite old, so it does not include the later uses of wax. Of course it will not be possible to give you a complete list of the uses of beeswax, nor will it be possible to give you the formulae for the different uses but I have tried to give you a few of the uses. When you discover new uses be sure to report them to the Bee Journals and to the American Honey Institute.

SOME MEMORIES

By Lewis Hawthorne, New Castle

Many people are prone to think of "those good old days" as being better than the present. They certainly were not, to my way of thinking. So many things which we enjoy now, far more than compensate for those lost in the past.

However, there were a great many good things in the past years. Truths learned by others and by ourselves should be considered before we totally discard the old for something new and untried.

We all have memories which are a mixture of pleasant and unpleasant things. No matter how retentive our mind may be, it is human nature to push disagreeable memories away back on the shelf behind something pleasant to contemplate. Life is a lot pleasanter that way I will admit. It will not hurt us much and may help us a lot to drag out mistakes from memory's storehouse and give them a good looking-over. Make the pesky things do some good anyhow. I will illustrate.

There is in the south today, a man who is considered an awful crank about cleanliness in the production and handling of honey, all because of boyhood memories. When we were considerably younger Alan and I helped his father extract honey all one long hot Friday. A heavy honey flow was just coming on with the broodnest clogged with honey. We extracted fast and furiously with little regard for unsealed brood. The honey was not strained as it came from the extractor. It was dumped in tall cans to ripen and settle, and to be skimmed off later. Alan's father was a preacher who worked at his sermon on Saturday. Something turned up Monday, and it was Tuesday, another hot day, when Alan and I were detailed to skim the honey. A very few minutes of work convinced us that the top of that honey was ripe. Considerably over-ripe in fact. Memory of that mistake has done a lot of good. Extraction of brood combs was just rolled out over a large part of Georgia after that.

Another memory of boyhood days occurs to me. A slim boy standing beside that grand man and great beekeeper, Dr. C. C. Miller, near his home at Merango, Illinois. The honey flow had been poor and things looked bad. All at once bees began storing honey from no apparent source. Following their line of flight it was discovered that they were going clear across the Mississippi River to the "Pickle Fields" in Iowa. Said Dr. Miller, "My young friend, the Lord always provides nectar somewhere, if man only has the wit to help the bees get it. As the years go by, we will have to give the bees a better chance. If I only had my bees nearer the cucumbers, the thousands and thousands now being lost in the water would then be carrying honey for me." The Doctor's bees had access to several hundred acres of cucumbers planted on the Illinois side of the river the following year. Yes, as the years go by we have to move our bees from pasture to pasture or else build up local sources of nectar far beyond what they are now.

How are your memories of smothered bees? Almost everybody who has moved bees has had some loss from too little ventilation. When you move your bees this spring or summer or fall, take the whole cover off the hive and put a wire one in its place. Then your memories next winter will be more pleasant

than mine just now. Just because I moved some bees this fall with what I thought was sufficient ventilating wire—well it was not, and it ended somewhat sad for the bees and their owner also.

Now let each of us look over our stores of memories agreeable and disagreeable. Some of them are sure to make beekeeping more profitable to us either in pleasure or money.

REPORT OF THE COMMITTEE

The Committee appointed to meet with the Secretary of Agriculture, Hon. J. Hansell French, Harrisburg, met in the office of Mr. Harry B. Kirk March 24th at 2:30 P. M. Mr. Kirk together with Mr. Bell led the Committee to the office of the Secretary where we were very courteously received.

After making known our mission and some discussion upon it we were granted the assurance of a \$2000.00 increase in the appropriation for inspection work in the State for this year. There was very inclination on the part of the Department to co-operate with the Association in this work. The Department budget has been reduced about two-thirds since 1930.

Mr. Keil, Secretary-Treasurer of the Association, could not be present.

H. M. Snively, Carlisle, Pa.

REMARKS FROM SECRETARY-TREASURER

March 28th, 1936

From present indications the winter loss will be very high this year probably ranging from 25 to 50 per cent. dead from what I can find out of the Treedale Farms bees the loss will be about 33 per cent. as they are packed, have not looked in any hives as yet. March 25th the bees were coming in loaded with pollen. This same day I was finishing up pruning about a six acre piece of grapes, and the bees were working on a creeping weed, a pest to the gardens, which I know as "Chickweed." There was about two acres of it and quite white with blossoms, and the bees were getting honey from it.

I was disappointed in not getting down to Harrisburg on March 24th when the Committee of Beekeepers called on Hon. J. Hansell French, Sec'y of Agriculture, about getting more appropriations for inspection. Many bridges crossing the Allegheny river were still closed, and did not know how many detours I would have to take before getting down. I was in doubt if the snow would be away some weeks ago so had written him my views on the inspection in case I would not be able to attend, also my views on method of grading colors of honey, and hope our President will give a report of the meeting for April Penna. Beekeeper. I understand appropriations for inspection have been increased considerable. I feel this is good insurance that the counties getting appropriations from their County Commissioners this summer will not have a tendency to have the state decrease their appropriations, but rather to increase it. It seems some other states have had this happen, that when some counties appropriated the state decreased. I feel the Sec'y of Agriculture is as anxious to clean up disease as the beekeepers, at least more than some beekeepers, who seem to be indifferent what happens to the bees, even kick about inspection.

To the best of my records the following is a list of the ten counties having the most members in State Association: York 32; Philadelphia 29; Allegheny

27; Erie 21; Berks 19; Cumberland 19; Lancaster 19; Blair 18; Cambria 18; Lehigh Valley 17.

Now is the time for all good beekeepers to get another member for our Association.

A. T. Keil

The Annual Meeting of Allegheny County Beekeepers Association was held Thursday, February 6th, 1936 at The Down Town Branch Y. M. C. A., Pittsburgh, Pa., beginning 10:00 A. M. with three sessions, forenoon, afternoon and evening.

The morning meeting was principally for amateurs and beginners. Prof. Edwin J. Anderson, State Extension Apiarist, gave a splendid address on Spring Management of Bees, method of building up weak colonies by use of package bees, and how to introduce package bees. Questions were freely asked and answered.

Mr. A. T. Keil, Secretary-Treasurer, Pennsylvania State Beekeepers Association, gave a short address and demonstration on starting right with bees, showing what he considered best materials and methods of preparing equipment, nailing of frames and handling of the equipment.

The afternoon session was given to the annual business of the Association.

Mr. J. S. Fleck gave a report of the activities of the Association during the year and outlined the purpose of the Association. The objective, is more and better beekeeping in Allegheny County.

Many of the members had exhibits in the Farm Show at South Park and at the State Farm Show at Harrisburg.

Mr. Henry R. Eby, our County Agriculturist, and staunch supporter of the Association, gave a fine talk on the "Uses of Bees Wax."

Election of officers resulted in the same officers at last year being re-elected, as follows: John S. Fleck, President, A. T. Keil, First Vice-President, Guy P. Daniels, Second Vice-President, L. E. Havekotte, Secretary-Treasurer.

Prof. E. J. Anderson gave an interesting address on Beekeeping in Canada, illustrating with lantern slides.

All out of County Beekeepers were called upon for remarks or at least to get better acquainted.

At the evening session Prof. Anderson gave an illustrated talk on "Around the Season" in which he showed views of Apiaries throughout the state of Pennsylvania and elsewhere, showing through a high powered microscope American Foul Brood germs in action.

All sessions were well attended and from the many questions asked all seemed to be very interested. Ten new members were secured.

Mrs. E. B. Bond, representing A. I. Root Company honey interests in Pittsburgh District, gave a fine talk on uses of honey.

The meeting was concluded by Mr. Eby showing two reels of moving pictures "Animals in Yellowstone Park" and "Rodeo of the West" furnished by The Northern Pacific Railroad.

REVIEW OF THE SEASON

E. J. Anderson

The past winter was extremely severe and as a result the losses of bees during the winter have been very heavy. The causes for the heavy losses were threefold. In the first place many colonies went into winter with very few young bees. There was no honey flow over a large part of the state during August so that only a little brood was reared, then during September and early October the honey flow was very heavy so that the bees left little or no space for brood rearing. As the winter progressed the old bees died and there were not sufficient young bees to keep the cluster warm. In the second place the fall honey gathered was of a poor quality and a good bit of it was not properly ripened. The long confinement that occurred during the mid-winter caused the bees to accumulate an excess of waste. The bees were forced to leave the hive on cold days or die of dysentery. Some did both so that many bees died in the snow while others died within the hive and caused excessive spotting. The loss from this cause was much heavier than it has been for some years.

In the third place during the long periods of cold weather the bees would consume the honey in and around the cluster, then because of low temperatures they could not move to a new supply and starved with plenty of honey in the hive. In addition the entrances of a number of hives became clogged so that the bees suffocated. Sleet and ice were common during the past winter. Large clusters of dead bees can be seen near the entrance of hives in which the bees died of suffocation.

The loss this winter will probably go considerably above 25 per cent. It is difficult to determine the exact loss this early. Unfortunately many entire apiaries have been lost.

Nearly all the honey produced last year has been sold so that the markets in some sections of the state are seriously short of honey. Clover honey, both comb and extracted, can be obtained only at a premium. Small lots of honey are available here and there but it is honey that is not advertised and is not brought to the attention of the large buyers.

The clovers should be in excellent shape this spring. The heavy snow which covered the ground protected the clover against severe freezing and rapid changes in temperature. There should also be plenty of moisture in the ground to insure rapid growth after warm weather comes. These conditions generally precede a heavy flow.

Unless there is a very heavy honey flow this summer the supply of honey will be seriously short again next winter. It is, however, quite likely that we will have a favorable season. A shortage in this state always encourages outside producers to come in and establish themselves in our markets, thus creating a condition which is a real problem during years when there is a heavy honey flow.

EXTRACTS FROM THE MARKET NEWS SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE, BUREAU OF AGRICULTURAL ECONOMICS, MARCH 16, 1936.

PHILADELPHIA: COMB: 18 cases Pa. arrived. Supplies very light. Demand fair. Sales to retailers—PENNSYLVANIA, White Clover No. 1, \$3.50, few \$4.00.

EXTRACTED: No arrivals. Supplies light. Demand fair, market firm. Sales to confectioners, bakers and manufacturers—ILLINOIS, blended White

Sweet Clover and Basswood, 3-lb. crystal jars, \$4.35 per doz.; 5-lb. cans \$6.25 per doz. White Clover, 60-lb. cans 9 1-2c per lb. PENNSYLVANIA, Mixed Flowers 6-7c. NEW YORK, White Clover and NORTH and SOUTH DAKOTA, White Sweet Clover 8c. Brokers' sales for April delivery—FLORIDA, Tupelo Light Amber in cans 6c, in barrels 5 1-4c. PUERTO RICO, Light Amber in barrels, re-strained 68c per gal.

BEESWAX: No arrivals. Supplies light. Demand moderate, market firm. Sales by receivers—AFRICA, Yellow 25-26c. CALIFORNIA, Light to Yellow 26-27c.

PITTSBURGH: Arrivals by rail and truck, extracted 6,000 lbs. Mich., 6,940 lbs. bottled Midwestern.

COMB: Practically no demand. No sales reported.

EXTRACTED: Supplies moderate. Demand moderate, market steady. Brokers sales to jobbers, bakers' supply houses and large bakers—MICHIGAN, White Clover 9c, Light Amber 7 3-4-8c, Dark Amber 7 1-2-7 3-4c. MIDWEST-ERN, White Clover, 1 lb. jars \$1.50-1.60 per dozen., 14-oz. jars \$1.40-1.50 per dozen, 5-lb. pails \$6.25-6.50, some inferior quality \$5.00-5.50 per doz.

BRADFORD COUNTY NOTES

By Harry W. Beaver

The seasons changed gears without a clash and winter slid into spring, with floods and more floods, ending the old-timers claim that we do not have any old-fashioned winters anymore. The winter just ended, while not being as severe as sometimes happens other winters for short spaces, was steadily cold not allowing bees to break cluster and get on a fresh supply of honey, thereby causing them to starve an inch or so from ample food supplies. These long steady cold spells happen so seldom, like the recent floods, that too many bee-keepers do not take the trouble to properly protect their bees, and the result is that once in about five or six years there is a terrible loss of bees. Our loss will be somewhere around 10 per cent. by May 1st. Some yards did not have a single colony dead a week ago. One yard had 25 per cent. dead. I am at a loss to account for this high percentage of loss. The only clue I can see, is, that this yard usually gets some aster honey, and is situated in a long steep gully, and perhaps there is too much cold air flowing through the yard, although there seems to be ample protection by brush and trees above and around the yard. Unless further loss occurs, we will be able to easily make up the loss by increase, without buying package bees. Of course we can never be sure of a crop till it is in the cans, but from the present looks of clover we ought to have at least a fair crop of clover honey.

The order of the day at present is repairing and painting supers and wiring and nailing frames and putting in foundation and putting up sections. We like to have all such work out of the way by the time it is time to unpack bees in May. Maple season is in full swing and honey sales have come to almost a standstill. On several warm days I saw bees bringing in pollen, but failed to find the source as elms and soft maples are not yet in bloom. On examining several colonies I did not find an egg. I do not know if it is the heavy packing but such is the case every year where the bees are in the heavy packing, but they usually make up for the late start when pollen begins to come in.

BARGAINS---WHEN?

Every kind of merchandise has its standards, Standards for the making of economical merchandise, the kind of material, its treatment, the measurements used, etc., are to be considered in a bargain.

—For over 60 years we have been making bee supplies, improving whenever possible to give better service.

ROOT'S SIMPLICITY RADIAL EXTRACTOR
Replaced Multiple Reversing Extractor.

ROOT'S 3-PLY AIRCO FOUNDATION
Replaced ordinary brood foundation.

ROOT'S LOCKED CORNER FRAME
Replaced ordinary frame.

ROOT'S ANTISPARK SMOKER
Replaced old dangerous smoker.

—And there are many others.

Be Not Deceived

LOW PRICES ARE NOT
ALWAYS BARGAINS

We have samples of sections offered at ridiculously low prices that are made of veneer warped beyond folding.

Frames bored incorrectly;

Queen excluders that do not exclude, etc.

Buy the Best

It Pays

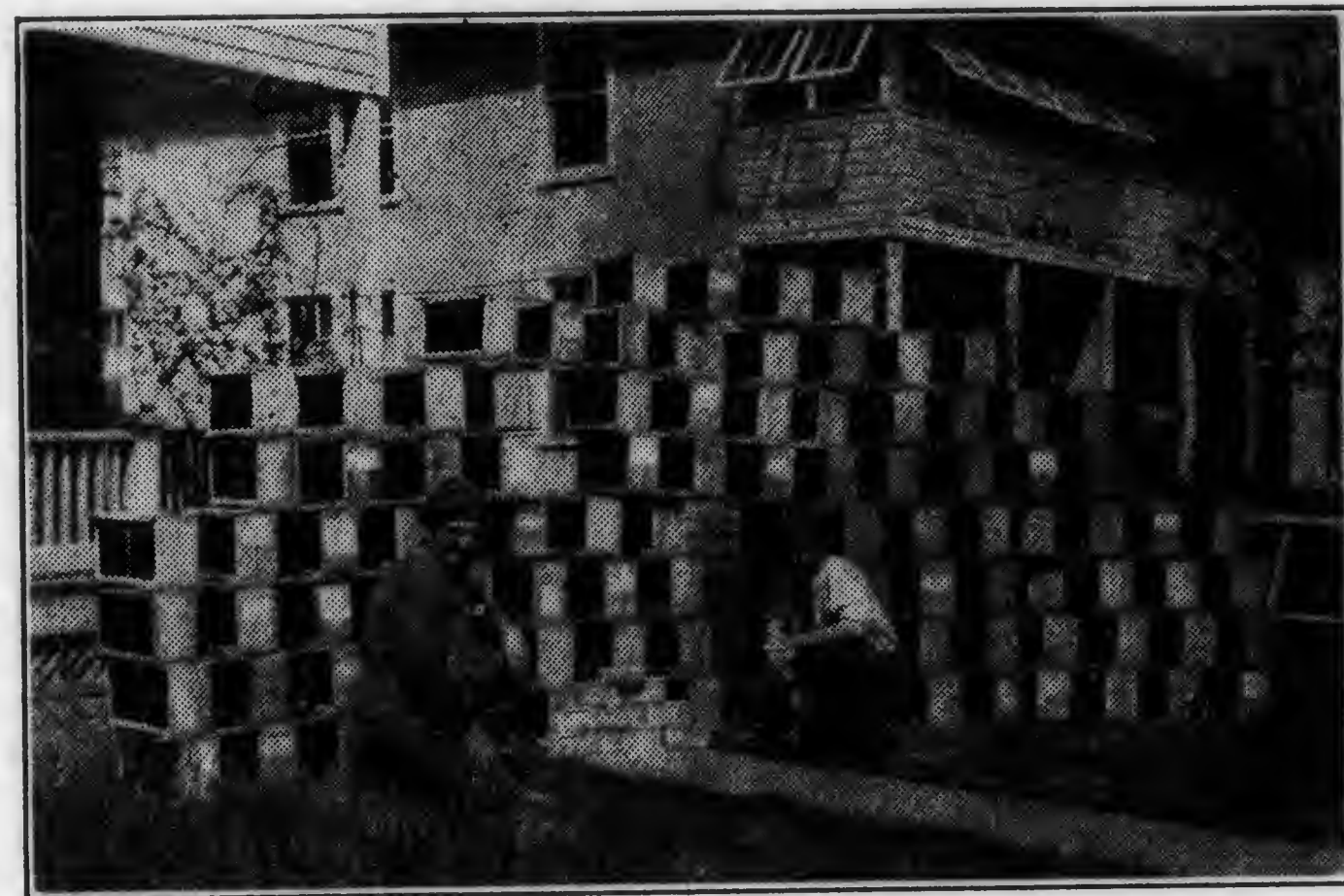
THE A. I. ROOT CO.
MEDINA, OHIO



CORRECTION: Our March advertisement in Gleanings in Bee Culture carried a special offer on 3-ply Foundation and frames. It should have read: "NOT POSTPAID." Include postage on future orders.

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STATE COLLEGE, PA.

THE PENNSYLVANIA BEEKEEPER



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THE PENNSYLVANIA BEEKEEPER

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THE PENNSYLVANIA STATE BEEKEEPERS PICNIC AND FIELD DAY

The summer picnic of our Association is going to be held at one of the outstanding beauty spots of eastern United States, namely, the Morris Arboretum. This Arboretum contains plants and trees in great variety, many of which are trees from foreign lands. There are also several greenhouses included in the Arboretum. One of the greenhouses contains ferns and other related plants. One greenhouse is built above water and contains those types of plants which live only in a humid atmosphere above or near water. It is indeed a treat to have the privilege of holding our Field Day at a place of this kind.

The picnic will begin at 9:30 A. M. Eastern Standard Time, the morning of Thursday, August 27th.

The location of the Arboretum is at the union of the Bethlehem Pike, highway number 309, the Germantown Pike, which is a bypass of route No. 422, and the City line of Philadelphia. Those traveling by car from the south-west or south-central part of the State can avoid the City of Philadelphia by turning off route 30 at Paoli. Take route 202 at Paoli to Norristown, then 422 until you come to the bypass of 422, follow the bypass to route 309 and the Morris Arboretum. To be accurate the Arboretum is at Germantown and Hillcrest Avenues, which is a block or two off the Bethlehem pike.

If you are traveling by train you can take either the Pennsylvania or the Reading Railroad from Philadelphia to Chestnut Hill station, which is a few blocks distant from the Arboretum. A trolley may also be taken to Chestnut Hill. You may walk from Chestnut Hill or get a bus there for the meeting place. Posters will be located along the highway guiding the beekeepers to the proper place.

The rules of the Arboretum do not permit a basket lunch to be conducted in the Arboretum. For this reason, the morning program, including the basket picnic, will be conducted at a farm across the highway from the Arboretum. There is a large barn on the farm which can be used in case of rain. The afternoon program will be in the Arboretum proper.

PENNSYLVANIA STATE BEEKEEPERS' PROGRAM

(Standard Time)

- 9:30—Open Forum: Questions and discussion
10:00—Demonstrations: Transferring, section wrapping, electric embedding, etc.—E. J. Anderson, State College
10:45—Report of survey made during National Honey Week in Cumberland County—H. M. Snavely, Carlisle
11:00—Group meetings of County organizations
11:30—Basket lunch
12:30—Address of Welcome—Dr. Rodney H. True
12:45—Remarks from Mr. Reustle, Weightman, etc.
1:00—Mrs. Malitta F. Jensen—Representing the American Honey Institute
1:45—State Inspection—H. B. Kirk, Harrisburg, Penn.
2:00—Bee Supply Company Representatives
2:30—Games and Contests—E. J. Anderson
3:00—Inspection of the Arboretum

Mr. Harry Beaver has partly promised to be present and give a talk.

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The first speaker on the Thursday morning program was Mr. Enos H. Hess of Mechanicsburg, on The Value and Satisfaction of Apiary Records. In talking with a man who seemed to know quite a bit about bees Mr. Hess asked him how many bees he had, and do the bees help to keep you? We want them to help to keep us. One woman had fifty pounds surplus, this is not enough.

Mr. Hess: What is the average record for Pennsylvania colonies?

Mr. Kirk: Hard to tell.

Do you have an accurate record?

Mr. Hess: I weigh colonies every morning.

Mr. Adams: How long do you keep queens?

Mr. Hess: I re-queen about 50% each year. Some I do not replace at all.

Dr. Phillips: This last record is a most important one. In the Journal of Swiss Beekeepers' Association records of this kind are published. About twenty-five beekeepers keep these records, weighing every morning and evening, which shows the daily gain of nectar and loss through evaporation. They also give the elevation of their different readings. This Journal is published annually.

Mr. Anderson: It would be fine to have financial records, showing the cost of producing honey for the year.

Mr. D. C. Babcock, of the A. I. Root Company, gave a talk on the Advertising and Selling of Honey. He told of going into a store where he asked if the lady sold honey. She asked if he was from the Board of Health, and he said he was just interested in honey. She then told of having a case of honey which she could not sell, which I asked to see. She said it was painted with bronze paint. It had been left in the comb and was travel stained. I looked it over and told her she could sell it as it had not been painted.

He said we know the turn over in the buying public and there is a job in advertising and selling honey.

Mr. Hess: Program in Cumberland County. We have a Dairy Show in Cumberland County in which we had an observation colony, where the people could look for the queen. We also had wafers and put on our cream honey. We sold some honey. We also had an exhibit at the Lancaster Fair, where we gave cream honey and wafers to the people. The children liked it and we said they should tell their mothers.

Mr. Babcock: We used Beechnut Butter Wafers, which came in five pound cans. They are a hexagon wafer and can be put in the mouth at once. They are thin and you taste the honey without having a mouthful of biscuit. We also used paper spoons, which hold just enough honey to put on a wafer. We gave away fifty gross boxes of wafers.

THE VALUE AND SATISFACTION OF APARIAN RECORDS

Enos H. Hess

Many people keep or have bees but a commercial beekeeper wants the bees to also keep him. For the best results each colony needs to be made an individual study and manipulated according to its condition. Where a person has 25 or more colonies it is not likely that the condition of each colony can be remembered from one inspection to the next. Hence each colony should be numbered.

My method is to stencil the number on a piece of painted section tacked on the hive and supers. I weighed a colony daily the past season and would be willing to pay ten dollars for a similar record for the past 17 years for which I have colony yields. It would enable me to predetermine in a measure at least the probable needs of supers and treatment. The high daily yield for 1935 was 14 1-2 pounds on June 1, from the locust.

My average yield per colony for 19 years was 49.2 lbs. The low year was 1924 when I had no surplus. In 1921 I had an average of 4 lbs. per colony. In 1924 I had an average of 93 lbs. I wonder now whether my low yields in 1921 and 1924 were due solely to weather conditions or to my poor management. Taking the reported yields for Cumberland Co. as obtained from Mr. H. B. Kirk, Chief Apiary Inspector, and basing the average yield for 5 years 1930-1934 at 100, the yield for 1921 was 33.3 per cent. and 1924 was 32.3 per cent. Hence I conclude that two-thirds of my failure was due to weather conditions and one-third to my poor management.

The 1935 crop of honey for this region was reported as fifty per cent normal. I take a little consolation for improvement in methods of management since my crop for 1935 of 52.8 lbs. per colony was 1.6 lbs. higher than any average crop for 19 years and 54.6 per cent of the peak crop of 1934.

A graph of the average colony yield and the maximum colony yield is also a valuable study. Thus while my average yield for 19 years was 49.2 lbs. the average maximum yield for the same period was 124.4 lbs. The minimum for the year would be zero as in each year I have had a few colonies that produced no surplus. To know why would be very much worthwhile.

The side-line beekeeper who is a student of his bees and keeps accurate records could give valuable data that would not only be a satisfaction as well as profitable to himself but to other bee keepers as well. Men like Dr. C. C. Miller, D. Longstroth, Demuth and Phillips are public benefactors by having made accurate observation and correct conclusion which we can profit by as we follow their lead.

A handy pocket memorandum can be used in the bee yards and the records transferred to a more permanent record as a bookkeeper uses a journal or day book and ledger.

While working at the Pa. Experiment Station under Dr. H. P. Armsby there was a note on the top of each sheet of the note pad: "Nothing is too insignificant to be noted." In summarizing and writing up for publication various experiments I frequently found irregularities in the records that an accompanying note as to the reason would have been extremely valuable. When I made the first sixteen year summary of the Jordan Fertilizer Plots we had to do our work over which took at least a month of hard work because we found a record after the first summary was made that explained why Plat 8 was so much better than the other plots. Hence it had to be excluded from the base comparison with the other plots.

Let us as beekeepers get in the habit of making accurate observation which we will record and later analyze and compare with other apiary records and thus help to establish a basis for scientific beekeeping.

ADVERTISING AND SELLING HONEY AT FAIRS AND FOOD SHOWS

By D. C. Babcock, A. I. Root Co., Medina, Ohio

"Producks we mannaackcher don't need no advertisink," said the man at the bottom. Sometimes I think that that applies to the beekeepers when they complain about the price at which they have to sell their honey. It seems that the average beekeeper thinks because honey is so well known and has been on the market for centuries that all he has to do is put a sign out and say "Honey For Sale" and the customers will come to him—if there are any in the vicinity. Now, the average person knows practically nothing about honey. Just last week I gave a talk before the Cleveland Retail Grocers' Association and although my talk contained facts that practically any well informed beekeeper knows, I had a large number of grocerymen come to me after the talk and say that they had learned a great deal about honey. Even the President of the organization, a keen, wide-awake business man selling honey in his own store, told me that he did not know there were so many kinds of honey; that he had found out a great deal that would help him in future sales. Now, the average consumer of honey or prospective customer knows even less than the average merchant about the product. A year ago last fall we started packing Root Quality honey after being out of the market for five years. Realizing that the buying public changes constantly, and perhaps the name Root is not so well known in Cleveland as of old, we decided to spend some money to pull back this market. We considered radio advertising but about the time the Cleveland Industrial Show came along. We went over carefully the set-up of this show and finally decided to take exhibit space for our entire line. We did not go into this show primarily to sell honey, but we did do some sampling and made sufficient sales to make us consider seriously the Cleveland Food Show. After carefully analyzing the comments made by visitors to the show, I decided that no "word of mouth" could ever convince housewives that honey has a place on their table. We went into the Cleveland Food Show with the express purpose of contacting at least a small percentage of the people of Cleveland to show them that Root Quality honey was a good honey to eat. It took some hard work to accomplish what we did. Last week I heard of an exhibitor at last year's Food Show who was quite disappointed with the results he secured. However, it was discovered that he had made no effort to interest people visiting the show. We selected with care our booth and took a corner position. This gave us access to people on two aisles. The show opens at 1:00 o'clock at which time every exhibitor must have everything in readiness as the crowd starts at once. We used two girls to serve honey on small Beechnut Butter wafers. I recommend this particular wafer to anyone serving honey because of the size and the quality of the wafer. The arrangement of our booth was such that persons passing the first girl serving honey would be caught and contacted by the second girl. It was not a common occurrence but it happened quite often that people would come along and turn down the sample offered by the first girl and make this remark, "Oh yes! I know what honey is. I don't like it." Then before they could square themselves away to look over other exhibits, they found they were confronted with the task of turning down the second girl. Rather than do this, they would accept the sample. Here it what would happen in a great many cases—turning to their friends they would remark, "Just sample that honey. I've never tasted honey like that before." They would start asking questions about honey and would soon display their ignorance of this food product that as beekeepers we think they know so much about. Now, we kept telling our story over and over, feeding the multitude and at the end of nine days, we had served 50,000 people or an average of a sample every four seconds. Did we sell honey? Yes, we did! Our sales averaged a sale every four minutes, ten hours each day for the nine days. Our prices were not cut prices but the standard honey prices in Cleveland. People in certain localities may have developed a taste for a particular flavor of honey, but do not try to develop or sell a big market unless you can give to them a product of the finest quality and uniformity throughout the entire season. Last but not least, do not take for granted that your customers or prospective buyers are thoroughly informed about your product, honey. You are connected with an industry which has a wealth of romance and you are poor salesmen, poor businessmen if you do not use it.

INTRODUCING PACKAGE BEES

By Edwin J. Anderson

Because of the heavy winter losses in many States of the North package bees were ordered in unusually large quantities to fill the empty hives. The large number of orders were greatly in excess of the ability of the Southern shippers to fill, so that many of the orders were either delayed or not filled at all, much to the disappointment of the buyer, the final result being general dissatisfaction and the consequent loss of a crop of honey on the part of those who did not receive prompt shipment of their bees.

This experience of the past spring shows the necessity of proper care of bees in fall so that as many as possible may go through the winter and become honey producers the next year. We have not come as yet to the point where we can depend entirely on package bees for replacing our winter losses.

In addition to late shipments there are the usual number of queens that fail and make the packages worthless for the production of honey from the early bloom of alsike or Dutch clover. It should be added here, however, that large crops of honey are obtained each year from package bees properly handled and that we would not wish to do without package bees. The point to be emphasized here is that we should not neglect our bees in the fall and depend entirely on package bees to make up the losses.

The success from packages varies considerably from year to year due to the type of season and the care given the package. As a rule it pays to get the packages early or soon after the middle of April. Packages should be placed on good clean combs or foundation and should be fed at least once every week until they are strong enough to go into the supers. Considerable more sugar syrup feeding is necessary when bees are placed on foundation, rather than drawn-combs. Excessive feeding will retard the development of colonies placed on drawn-combs.

Packages are also used to strengthen or save weak colonies early in the spring. Very good results were obtained by packages used in this way this spring. A pound of package bees will do a lot to build up a weak colony.

The cover page shows a shipment of package bees received in Adams County this spring to be used in pollinating the fruit. The beekeeper to the left in the picture is Ed Sachs and the local County Agent is on the right.

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WINTERING BEES

By Howard Myers, Ransomville, N. Y.

The requirements for successful wintering are rather well known. The salient features are good food and plenty of it, sufficient insulation, young bees reared late in the season, and protection from the winds. Together with conditions affording as nearly absolute quietness as possible.

Under these ideal conditions bees can withstand long periods of confinement and come out almost perfect.

However, it is seldom that all such conditions obtain even under efficient management but they can, by certain manipulations be brought to approximate somewhere near the desired conditions.

Plenty of good food is of first importance. There is nothing better than good clover honey, at least 40 or 50 lbs. is necessary in our section to carry safely through a good colony.

It is true that a much less amount will suffice some seasons under favorable circumstances but there is always danger of valuable colonies starving or retrenching with brood rearing activities during the early spring if there is not a great abundance of food available.

Where stores consist of poorer grades of honey than clover more of it is used than of the better quality. Where there is insufficient good honey sugar

syrup can be substituted with equally good results, and where the stores are of low quality such as goldenrod and aster they can be improved by feeding sugar syrup very late in the fall or about the latter part of October in western New York.

These sugar stores are placed in the empty cells lately vacated by the last hatching brood and are used during the early part of the winter by the bees leaving the poorest stores to be used during the spring when periods of confinement are apt to be of less duration.

Insulation can be provided by either of two general methods in common practice. If we could be sure that all other conditions were 100 per cent, the use of special repositories or cellars would be ideal. Such a place should be so constructed as to prevent changing temperature and should be maintained about 50 D. Fahr regardless of outside conditions so that the bees would remain quietly spread over the combs without it being necessary to perform any action or form a cluster to maintain warmth. Under these conditions very little stores would be consumed and the bees should stand long confinement and come out in the spring in excellent condition. But it is so difficult and rarely possible to have conditions thus ideal and practical results are so various that more and more beekeepers are concluding that better average results are obtained by the less ideal and more practical method of applying insulation to the hive and leaving it outdoors with the entrance so arranged with a bridgeway that the bees can fly out at any time that the weather might be warm enough thus giving occasional cleansing flights during the winter.

The most common practice is of providing a cheaply constructed outer case large enough to hold several ordinary hives with about 2 to 4 inches of packing material under and around the sides of the hives and somewhat heavier amount over the top. In our own practices we use several different types of cases and methods of packing.

Double walled hives with sides packed with one inch of ground cork and chaff cushions over the top have consistently given poor results year after year, and for the last few winters we have placed these hives within other cases or wrapped them with black paper.

Another lot of double walled hives—big clumsy affairs with about 3 inches of chaff as permanent packing and heavy chaff cushions over the top—have come through successfully for five winters, with the exception of the extreme hard winter of 33-34 when about 25 per cent. of this yard was lost.

At best double walled hives are cumbersome, inefficient, awkward and heavy equipment and are not desirable where migratory beekeeping is practiced. We endure using about 200 of them simply because we have them.

This winter we have around 400 colonies in wood cases and some 500 in paper cases. The wooden cases have seen many years of service and have been very satisfactory in the results secured. However, they are hard things to move from place to place and we now consider them suitable only for permanent wintering locations. Their only advantage over paper cases is that they afford a better place to store packing material during the season when the bees are not in need of protection. Some of the best packing material we have has been in use for 15 years or longer and getting better every time it is used as it becomes more decomposed and finer.

We have used various paper cases for a number of years with increased satisfaction in their use each year. Our experience has ranged over a wide quality of paper and many different units from single colonies to clusters of eight. The results have not been greatly different except in the cost of material and time required per colony for packing. At the present time we favor an asphalt felt paper 12 lb. per hundred square feet 432 sq. ft. per roll (144 lineal ft.) What we use is manufactured by the Certained Company of Niagara Falls, N. Y. Undoubtedly other companies make just as good paper. This is a black paper and if taken care of during the summer can be used several times. However, it is rather cheap and need not be saved for reuse if it is more profitable to use it for smothering down weeds in front of the hives or for protecting packing material during the summer.

Clusters of eight hives, two facing each direction of the compass form compact economical units for packing and are convenient for handling and when unpacked can be shoved apart to make two rows of four each and are convenient for the seasons work. These clusters require about 20 lineal feet of paper to encompass them and allow sufficient lap and space for packing, and about seven lineal feet for a cover. The paper is wrapped around the cluster and pinned loosely with nails, a wad of packing material about two or three inches thick is placed at each corner to hold the paper away from and provide space for corner packing and then a lath is nailed directly above every two entrances keeping the paper close to the ground. (Any space between hives or under them should be filled with packing before putting the paper on).

Six penny nails are used for nailing on the laths but are not driven in all the way but left one inch to allow for tying on the strings. The balance of the packing is then placed, packing clear to the ground at the corners and down to the laths over the entrances. The hives being somewhat oblong allows for about 4 in. extra packing at the sides of the corner hives. Each hive in the cluster has the added benefit of the conserved protection of each other. The upper edges of the side walls of paper are then folded over, the cover placed and all tied firmly down with binder twine. This method requires a little less than 3 1-2 lineal feet of 36 inch paper per colony of bees packed or at a cost of about 4c per colony including twine paper and nails, excluding labor and packing material. In other words the cost of material in this method about equals the interest on the investment in cases made from lumber.

The tying of the strings is the slowest operation and costs the most of the labor. In our work the past fall two experienced men and an unexperienced helper averaged four clusters or 32 colonies per hour of working time and this included some other minor operations of feeding an occasional colony, etc. Cutting small holes about one inch in diameter for each entrance and placing a little mouse bait around under the edges of the paper completes the job. No more attention is needed until spring when occasional dead colonies are plugged to prevent robbing.

If the work is well done the finished case has a rather neat appearance. It is practically wind-proof and for some reason the bees seem to come out in better shape in the spring than do those from the regulation wood cases.

I have spent considerable of the time in this discourse on the artificial or man-made elements of wintering, but by no means do I wish to leave the impression that they are the most important. For the contrary is the truth. Artificial protection is only a secondary essential or rather helps to secure the best results. The real essentials are quantity and quality of stores, and age and quantity of bees. Medium strength colonies of about 3 to 5 lbs. of young bees are to be preferred to great colonies of half worked out bees. Natural protection from winds, air drainage, or apiary sites affording slow, natural movement of air currents with no direct exposure to winds are ideal.

A slight elevation of cleared land surrounded by thick woods is about as near perfect as is possible to secure. Low places should be avoided as cold damp air settles and will remain in such places resulting in the collection of moisture within the hives and consequent loss or damage.

Protection during the spring is just as important if not more than during the winter, and so we delay unpacking our bees just as late as possible. Formerly we used to leave them in the winter cases well through the fruit blooming time, but with the advent of the renting of bees to fruitgrowers for pollination purposes we are unpacking them just before the opening of apple blossoms. And this is the first active work we do on live bees in the spring. Although, as previously mentioned, some attention is given from time to time earlier in the spring to discover dead or nearly dead colonies and the entrances stopped or the hives removed to the honey house to prevent robbing.

In unpacking, the colonies are simply lifted from the wooden cases and set near to the case as possible to bring the entrance of the hive close to the former entrance in the case. The packing material is left in the case and used from year to year. With the paper cases the paper is removed by cutting the strings

and pulling off the lathes. The packing material from several groups is raked up in a pile and covered over with part of the paper. The rest of the paper is either rolled up and put away for future use or else spread down in front of the hives to keep the grass down.

A cool damp day when bees are not flying much is an ideal time to unpack as there is not nearly as much drifting and mixing of the bees as there is when there are many bees out that are bewildered when they come home and discover the changed conditions. With several hundred colonies to unpack it is not always possible to select the best weather conditions and unpacking has to go on regardless, using all precautions possible to prevent as much confusion among the bees as possible.

With the large units of eight colonies, two facing each direction of the compass, we observe that there is less confusion when the packing is removed than there is where the hives are taken out of wooden cases, or where there is a greater number of smaller units unpacked. There are a great many less entrances in the same relative position in a given area with the eight colony cluster than in any other method of packing that I have tried.

Q. What material did you use for Insulation in Packing for Winter?

A. Straw or anything.

Q. How thick is the packing?

A. About two or two and one-half inches on sides, 6 inches on top.

Q. How do you hold it on the side?

A. Put paper around the side and tack at bottom with lath, the other materials in this.

Q. What do you put around the bottom?

A. Set it close to the ground and stuff openings with paper. Leave entrance open.

Q. Are you troubled with mice? A. Not very much.

Q. Do you put a bottom packing in the wooden case? A. Yes.

Q. Doesn't the ground freeze in winter? A. I doubt that it does.

Dr. Phillips told of a demonstration in which 234 colonies were placed in a couple of cases. There was a very small loss. In fact, at the end of the winter the only ones alive were the ones which were packed in cases.

The larger the package the cheaper the units. No tendency to drift noted.

Q. Should there be a Southern exposure for packing?

A. Not worth the expense.

Q. Should the snow be cleared away? A. No, this acts as insulation.

Q. How high should a 10 frame hive be?

A. A story and a half. One story is not large enough.

Q. Is there any advantage in having a story and a half for the queen?

Do you find that it gives sufficient brood rearing space?

A. Yes, for the average queen.

Q. Do you use full depth supers for your extracting equipment? A. Yes.

Q. Do you raise the shallow super? A. Leave it alone.

Q. Do you produce any comb honey with the shallow super?

A. Yes, we get away from a great deal of pollen.

Q. Do you find nicely filled sections? A. Yes.

Q. What is the use in packing bees at all?

A. We will let you find that out.

Q. Do you need level ground to fit packing paper right on the hives?

A. We have level ground.

Q. What do you get for pollination of orchards?

A. Three or four dollars per colony.

Q. Who pays the transportation? A. We do.

Q. How many colonies do you average for pollinating an orchard?

A. One of the best fruit growers who owns twenty acres of McIntosh apple trees uses one colony per acre.

Q. Do you find that the trees nearest the bees are better pollinated?

A. I found that the side nearest the bees was better loaded.

After Mr. Howard M. Myers, of Ransomville, N. Y., gave "My Experiences in Wintering Bees," he said he has been interested in the A. I. Root Co. for many years as a customer. He said there has not been enough advertising of honeycomb candles. He had sold \$40.00 worth of candles at Rochester Fruit Show in two days. What was needed was more advertising and more push by beekeepers. He quoted a beekeeper who yesterday told of a million dollars of honey going to waste each year in Pennsylvania.

He told a story of a man who said he had a cucumber patch and it made all his bees cross. The bees gathered the pollen, took it home and fed it to the babies, the babies got colic, had to be up all night with them and that made them all mad.

Mr. Myers also showed pictures of his packing cases.

INTRODUCING PACKAGE BEES

By Edwin J. Anderson

Prof. Anderson at this time asked for a discussion of the Premium List and for suggested changes for the next year's list. At the present time bottles of honey are used in grading.

Dr. Phillips described an illuminated honey display at the State Fair at Syracuse. The honey was formed into a pyramid with a strong electric light showing from under the jars of honey. The honey was placed on glass shelves, each row being smaller with darker honey on the bottom and growing lighter at the top. The bottom row contained about 50 per cent buckwheat, growing slightly lighter until at the top of the pyramid it was entirely clover. It had the effect of a flame and attracted the crowd.

At another State Fair the honey was formed into the shape of a comb, with lights in the middle. The display was about ten feet high and could be seen throughout the show. The comb was not as satisfactory as the pyramid because the lighting was not as effective.

Dr. Phillips was quite impressed by the display at our Farm Show as he believed the quality shown gave a fine impression of the amount of honey produced in Pennsylvania.

Mr. Hess said that the people in the Farm Show could not find the honey exhibit as there was no sign at the exhibit.

Mr. Keil said that the pyramid might not be allowed here as they already had their exhibit as high as is allowed, which is about 5 1-2 feet.

Mr. Anderson said they might get permission for the pyramid.
Thursday—

Mr. Keil explained that in placing honey in different sized jars, this changed the looks of the color. Therefore there should be a standard jar if it is to be judged by the looks when bottled. Should have standard color and package.

Mr. Hess said that a flat jar will make honey look a different color than if placed in a round jar.

Rev. Snively—the amount of space for County or Association exhibits might be determined by the number of exhibitors in the Show.

Mr. Keil recommended that Mr. Kirk portion it out.

It is not fair for an individual not to have enough space. We should try to get the Show Commission to give us more room.

Mr. Kirk said that it was hard to say at the present time just how much space would be needed for next year because of growing County Associations and the number of individual exhibitors from a County.

Mr. Beaver: Why not allow a County a certain amount of space and allow them to divide into individual parts.

Mr. Kirk: In eight requests for individual space, the space is divided into eight equal parts.

There are other points besides quantity.

There might be just a few bottles, but have a variety represented.

Adjournment.

The Thursday afternoon meeting was opened by President Anderson with a continuation of the discussion of the morning.

Mr. Keil: At the present time more money is going to the County Association collective exhibits than to the Individual who does the work. I believe the most money should go to the individual collective exhibits, i. e. scatter it out so that more individuals get prizes. Either do away with the County Association prize altogether and add what previously has been going to the County Association to the Individual, thus more individuals getting prizes by graduated scale, or allow Associations to compete with individuals, when five or more individuals make up an association exhibit but any exhibitor in the association exhibit cannot also have an individual exhibit, neither can individual exhibitor help put up an association exhibit. I believe this is fair to all.

Mr. Berkey: Why not appoint a committee to try to iron out this matter?

Motion moved and seconded and carried.

The president appointed the following for this Committee: Mr. Floyd H. Sandt, Charles H. Hess, Harry W. Beaver, H. B. Kirk and Mr. Hodgkiss.

Dr. Phillips at this time explained "Some Physical Properties of Honey." He said among other things that when honey is in liquid form and is put into granulated form, it then does not taste the same.

Mr. Keil: What are you willing to give to the American Honey Institute. Is anyone willing to take this up?

Q. As individuals or an Association?

A. As individuals.

Thursday P. M.

Mr. Anderson: What will you give as individuals so that we can go ahead?

Mr. Beaver: Why not pass a paper so that the men might put down their names and what each will give?

A paper was passed.

SOUTHERN BEEKEEPING AS I SAW IT

By Harry W. Beaver

"Not all is gold that glitters." Not often does this saying come to one so forcibly as it did when I took a trip a year ago into the sunny south, and especially in Texas. We read of the flora of southern states, the long seasons, the swarming, the package bees, the mild winters, etc., etc. till we come to think that our lot here in the north is all frozen assets and everything rosy hued in the warm climates.

The first beekeeper of note that we visited in Texas was the genial T. W. Burlson & Son at Waxahatchie. They have a big packing plant in which they pack and distribute upwards of a million pounds of honey during a year. They have around two thousand colonies of their own which they run mostly for extracted honey. Mr. Burlson said, why we had 65,000 pounds of our own this year (which is thirty-two and one-half pounds average per colony), we buy the rest from up in Idaho. Well we here in Pa. think we have small yields but think of that yield. But then they sell around 500 colonies every year which helps out in receipts. Waxahatchie is in a cotton section in which the cotton does not yield honey, therefore there are not so many honey plants for the bees to work on and the bees must be moved to other locations for the honey

flow. He winters them in the brush country to the west, where they can get pollen and a little honey during the winter.

Our next beemen we found down in Bee County, rightly named, for here were bees aplenty. Several Minnesota men were situated here with near a thousand colonies amongst them for the express purpose of raising package bees to take north in the spring to repopulate their hives in Minnesota. On examining some of the colonies that they had bought from twenty to fifty hive men we found good brood combs in part of the brood nests and drone comb in the balance. This condition puzzled us for a while till we learned that the moth is so bad there at all times of the year that as soon as combs are not occupied, the moths take possession and eat up the combs, and when the bees increase in numbers and build the hive full of combs again, behold the drone comb. This is probably the explanation of why there is so little American foul brood in Texas.

As soon as a colony dies the moth destroys the combs, sometimes within a week, and since very few bees die with any honey in the hives, it is easy to see how foul brood is eradicated without the beekeepers help.

Bee County has more diversified farming, is rougher land and has a good deal of brushy pasture land, which yields pollen and some honey just right to build up colonies rapidly in the spring.

The next bee territory was down on the Rio Grande. This valley extends 50 miles back from the river, is level as a floor and has soil from four to six feet deep, rich and black. Here is where they raise the citrus fruit and all kinds of vegetables. Onions, carrots, cabbage, peas, beans, anything you want except celery, and I failed to find out why they did not raise that. Perhaps they left that for Florida to raise. Here in the valley there are an abundance of beekeepers having 50 to a hundred colonies, a few exceptions are the Aults at Weslaco with 800 colonies and Williams at Lyford has 500 colonies and Pendleton also at Lyford has 150 colonies. Here the uncleared land is densely covered with all kinds of brush, thorns and cactus, each yielding its quota in a good season. Here in the valley they claim the bees work the year round, and here was the only place where they boasted of honey crops of one and two hundred pounds average per colony. One drawback to Texas is that their honey is mostly what we would call off grade. It is good enough body but mostly dark and mintish or bitterish of flavor, except the guajilla and mesquite which is very light in color and a flavor about like our clover with a tinge of basswood. We sampled all honey as we went along, and after eating several pounds of a variety one got used to it and it actually tasted good.

One of our northern men remarked that the reason that Texas did not ship any honey out of the state was because no one but a Texan would eat it. In Louisiana we found very few beemen at home. Their wives would say either one of two things. They have gone fishing or they are away trapping. At one apiary they had just brought in a truck load of muskrat skins and when we commented on them, they said that was just a drop in the bucket. This is how they spend their time in winter. While there were many well kept beeyards in Louisiana, there was no boasting about big crops, about thirty to forty pounds average per colony seemed to be the crop and forty to fifty the size of yards.

You have read of beekeeping in the balance of the southern states in Gleanings, but less than fifty pounds to the colony seems to be the rule except in favored locations and favorable seasons. One thing they can do thru the South and that is to raise bees, they breed tremendously in February, March and April, just when the northern beekeeper needs package bees. Some of the shippers do not expect to get any honey whatever but depend on bees for shipment. Of course there are drawbacks in the South as well as in the North. But then, as Jane Ace says, if we didn't have the bitter we could not enjoy the better.

Question: How did you say Mr. Burlson reliquified without melting the comb in the bottles for bulk honey?

Answer: He said "That is my secret." They have trade secrets, but when I said heating to about 110 degrees he just laughed, so I suppose that is about right.

We were very sorry that our genial and humorous member and always welcome speaker could not be with us, Mr. Jerre C. Frazer, in charge of G. B. Lewis Co. Branch Office, Wheeling, W. Va., however he sent his talk "Uses of Beeswax" which was read and enjoyed by all.

Mr. Charles S. Hess told of the poison from cotton. Aviators are now able to spray by means of a fine cloud of dust which settles to the ground. There should be more co-operation among beekeepers and fruit growers since losses from spray poisoning can be avoided only by co-operation among those interested.

Mr. Charles Hess represented the beekeepers at the meetings of the Agricultural Council. He reported the following resolutions as being acted upon and passed by the Council:

From the Agricultural Council
MARKETING

Pennsylvania offers splendid markets for the products of its farms. It is the feeling of the Council that in a number of our products the Pennsylvania farmer is not netting the maximum returns which the markets and the quality of his products merit. We, therefore, urge the Pennsylvania State College and the Pennsylvania Department of Agriculture to devote as much of their facilities as possible toward the better merchandising of our farm products. We further suggest to the several member organizations in the Council that they build up closer relationships with the distributing and consumer agencies in the State to whom these products are sold.

Experience has shown that cooperative effort by producers is the soundest procedure in helping to bring about a volume production of a high quality product that will improve and enlarge the market outlet for our products.

Being a part of American Agriculture, the Pennsylvania Council stands for the policy of American markets for American farmers.

RURAL ELECTRIFICATION

For nine years the Agricultural Council of Pennsylvania has contended that electricity must be taken out to the farmers and homes in rural Pennsylvania. By the concerted action of the farm organizations of the Council with the cooperation of the Public Service Commission and the electric companies through the Pennsylvania Joint Committee on Rural Electrification, substantial progress has been made so that today there are 188,000 customers on rural lines of which over 47,000 are farms.

While substantial progress has been made, the time is here for speeding up the building of rural lines. With the many new uses and lower rates, electric service becomes increasingly necessary for satisfactory living conditions in the home and for the most profitable production on the farm.

The Council urges its Rural Electrification Committee to press for more rapid extension of rural electric service on the most favorable terms possible.

TRESPASS LAW

The Council recommends that the trespass laws be amended so as to give adequate protection to the property owners against the depredations of unscrupulous trespassers.

DEFINITION OF AGRICULTURAL LABOR UNDER SOCIAL SECURITY ACT

The term "agricultural labor" should be defined either by administrative interpretation or by statutory definition as follows:

Agricultural labor is the labor employed in the area of production in connection with the growing, harvesting, preparing for sale or any other activity or work of the farm and all things necessary or incident thereto; delivering to packing or processing plants, to a for-hire carrier, or to market; of all the products of the soil and of live stock and its products.

RESOLUTIONS

PENNSYLVANIA STATE BEEKEEPERS ASSOCIATION

We, the members of the Pennsylvania State Beekeepers' Association, ap-

preciate the privileges accorded us in furnishing space for the Honey Exhibit and a room for our Beekeepers' Annual Meetings and wish to extend our thanks to the Farm Show Commission and those responsible for these facilities.

We deeply appreciate the efficient services of President Edwin J. Anderson, and Secretary-Treasurer, A. T. Keil, for their untiring efforts in carrying on the work of the Association during the year.

We sincerely appreciate the services of visiting speakers in bringing to us very interesting and instructive information, which added greatly to our meetings. Dr. E. F. Phillips, Howard M. Myers, D. C. Babcock, visiting beekeepers from New Jersey and others.

Resolved that we commend the Exhibitors for their fine cooperation and interest in making possible the very fine showing in the Apiary Products Show.

Resolved that we endorse the recommendations of the Agricultural Council on the Articles pertaining to Marketing, Rural Electrification and also the Trespass Law.

Resolved that this Association express sincere appreciation for the inspection work, but recommends an increase in the number of inspectors (twenty if possible), for the 1936 inspection season.

Signed:

John S. Fleck
Charles S. Hess
H. M. Snavelly
C. H. Kohler
Warren A. Malick
Floyd H. Sandt

THE USE OF HONEY IN BIBLE TIMES

By Rev. H. M. Snavelly, Carlisle, Pa.

The Bible mentions three countries of the ancient world that produced honey; they were Egypt, Assyria and Canaan, or Palestine. Of these three Palestine is mentioned the most times. At least nineteen times Palestine is referred to as the land flowing with milk and honey. God promised this land to the Israelites for an inheritance, and each time it is mentioned as the land flowing with milk and honey, fourteen times in the Pentateuch and five times in Prophecy. When God called Moses to go and lead them out of Egypt, He speaks thus, "I am come down to deliver them out of the land of the Egyptians, and to bring them up out of that land unto a good land and a large, unto a land flowing with milk and honey." (Exodus 3:8) Again in Leviticus 20:24 He said: "Ye shall inherit their land. (Meaning the Canaanites.) and I will give it unto you to possess it, a land flowing with milk and honey." Finally when the deliverance was wrought and they came to the border of Palestine at Kadesh-barnea there were twelve spies sent out to view the land, they came back with this report, "We came unto the land whither thou sentest us; and surely it floweth with milk and honey, and this is the fruit thereof." (Numbers 13:27). But when they found out that giants dwell there in fortified cities they rebelled, and after a strenuous effort Caleb stilled the people and said, "If the Lord delight in us, then He will bring us into this land, and give it unto us; a land flowing with milk and honey." (Numbers 14:8). Promise after promise was made to them while they wandered in the wilderness for forty years. It's especially significant to notice in Moses' farewell address, Deuteronomy, in which he calls attention several times to the fact that they have missed, through disobedience, the land flowing with milk and honey, even in his concluding prayer he mentions thus, "Look down from thy holy habitation, from heaven, and bless thy people Israel, and the ground which thou hast given us, as thou swarest unto our fathers, a land flowing with milk and honey." (Duet. 26:15).

There are many other similar references but suffice it to say that these few give us a clear idea of the importance of honey as a food, and also that it was

favorably acknowledged by God. It gives us to understand further that bees were in abundance in Palestine; and they still are.

Strange as it may seem the first reference made in the Old Testament to honey is in Genesis 43:11. When there was a famine over all the inhabited world, Egypt, through the wise supervision of Joseph, had laid up provision to supply the rest of the nations around them. When Jacob sent his sons for grain he sent along some honey as a present for the King. This is the first reference, and twenty-three hundred years after the creation. However, my notion is that honey was in use centuries before this time.

Another strange and interesting thing is that bees are only mentioned four times in the whole Bible, and that in the Old Testament; while honey is mentioned no less than sixty-six times; only three of these references are in the New Testament; but each time bees are mentioned it is with a peculiar significance. God speaks to His people through symbols and metaphors. Moses reminds the people that if they forsake God and turn to disobedience the Amorites will chase them as bees do. (Deut. 1:44). In Psalms 118; there is an interesting picture of how God does deliver the righteous from the enemy when they compassed me about like bees.

Honey was found in the crevices of rocks or in hollow trees. And in one instance bees and honey were found in the carcass of a dead lion. Samson killed the lion and afterwards came by and found the bees and ate some of the honey. From this incident he made up a riddle which the Philistines could not solve. Jonathan, Saul's son, found some honey in the forest, after the victory over the Philistines, enough to revive, refresh and strengthen the arms.

Honey was eaten in the comb and extracted. We are not told how it was extracted, but we are told of the droppings of the honeycomb (Psa. 19:10). Reference is also made in I Kings 14:3 to honey in a cruse. Jesus appeared to His disciples after the resurrection and they gave him a piece of broiled fish and a honey comb (Luke 24:42).

Honey was used frequently with milk. Perhaps for this use came the term so often used in the Old Testament "Flowing with milk and honey." This is still an excellent combination. The ancient people got their milk from cows, sheep, camels and goats. Especially the latter was most highly esteemed. Those ancient folk of the Orient knew how to blend their food that it had savor. They knew nothing of refined, or concentrated, sugar in those days. The only sweetening they knew was honey and perhaps some fruit juices, but the fermentation made that unsatisfactory.

Butter and honey was also eaten. Isaiah wrote of the coming of Christ, 742 years before His birth, the prophet told what shall be His diet. "Butter and honey shall He eat, that He may know to refuse the evil, and choose the good." (Isaiah 7:15). In the 22d verse he says, "Butter and honey shall everyone eat that is left in the land." If we turn to the New Testament we find a very interesting connection here. Note: Luke 2:40, "And the child grew, and waxed strong, filled with wisdom; and the grace of God was upon him." Also verse 52, "And Jesus advanced in wisdom and stature, and in favor with God and men." There could not have been used a more significant term to express the valor of Jesus than that, "Waxed strong," "Advanced in wisdom, stature." I am sure we do no violence to the sacred scriptures to say that Jesus ate honey just as Isaiah prophesied.

John the Baptist ate locust and honey. This is sometimes repudiated saying that locust did not mean an insect, but if we go to the book of Leviticus 11th chapter and 22d verse it is very clear that locust belong to the family of winged insects, and that they were permitted to use them for food. There were four kinds mentioned. Which of these were eaten by John is not certainly known. Probably the one which resembles the grasshopper, it is still eaten in the East by the poorest of the people. It was usually prepared by being thrown into boiling water, after which the head and wings are removed and the body dried in the sun. They say it resembles the shrimp in taste. If this is true then honey would serve as a relish. This would not make a very desirable dish for us Western folks, but then the Bible is an Oriental Book, and it deals with Oriental customers. The Nazarite lived an ascetic life, and John was a Nazarite.

The Israelites made wafers and bread with honey. When in the wilderness they wandered for forty years the Lord fed them with bread from heaven, this they called "Manna." It is clearly stated the taste was like wafers made with honey (Exodus 16:31). The prophet Ezekiel nine hundred years later admonished them for setting bread, among some other things, made with fine flour, oil and honey, before the nations round about them. There was honey bread at least five centuries before Christ was born. We thought we had something new when the bakers of our land came out with honey bread. It's only an evidence that we are going back to the good old days.

It may surprise you to know that as early as 600 B. C. there were commercial beekeepers in Palestine. They exported honey to several other nations around them. Ezekiel wrote and lamented the fact their trading and prosperity ceased because of their disobedience. In chapter 27:17 he speaks of the exports of wheat, honey, oil and balm.

Honey was to be brought as first fruits in making offerings to the Lord. The honey to be used by the priests as food. It was not to be offered with sacrifices because of fermentation. Leaven and honey causes fermentation, and this was a symbol of uncleanness.

Honey is often used in the Scripture as a figure of speech. Speaking of God's Word in Psalm 19:10, "Sweeter also than honey and the droppings of the honeycomb." Psalm 119:103. "How sweet are thy words to my taste. Yea, sweeter than honey to my mouth." Proverbs 16:24, "Pleasant words are as a honey comb." Proverbs 24:13, 14, "My son, eat thou honey, for it is good; and the droppings of the honeycomb, which are sweet to thy taste. So shalt thou know wisdom to be unto thy soul."

We read in the Bible of giants which lived before the flood, "Mighty men which were of old, men of renown." Then, too, men lived to a great age. Look at Methuselah, 969 years, Noah, 950 years. There were also men of almost super-human strength, like Gideon, Barak, Samson, David and others. Now we can't say that honey was the chief reason for this, but we can be reasonably sure that honey was a part of their daily diet; and it did help to produce health, stature and vitality, and wisdom too.

This has been a delightful study to me and I appreciate the opportunity of presenting a few facts from a Bible standpoint. I think it will help us to take a greater interest in the beekeeping industry which is not only one of the oldest, but one that is certainly approved of God. It is an industry that is needful to the end of time. It will be up to the beekeepers to continue to foster and advance it. While the earth remains honey production should not cease.

SOME PHYSICAL PROPERTIES OF HONEY

By Dr. E. F. Phillips, Cornell University

Dr. E. F. Phillips at this time explained Some Physical Properties of Honey. He said that when honey is in liquid form and is put into granulated form, it then does not taste the same.

One line in Physics is the study of honey viscosity, which the beekeepers call "Body." Viscosity plays a great part in honey crystallization. We found that by putting in granulated honey with the honey, it helps crystallization. Dextrose is sugar which is soluble in water. There is 17 per cent. of water in honey. All honey is a super saturated solution of dextrose.

Honey does not crystallize immediately, for the reason that it has levulose in it also. Putting crystallized honey into honey will help crystallization. If honey is put down to zero, crystals do not form. A bottle of honey was placed at 20 per cent. below and at the end of six months a number of crystals had formed in the bottom. 57 per cent. is the ideal temperature for crystallization.

The specific gravity of honey is the weight per gallon. Prof. Phillips has been interested in this subject because if the weight is enough per gallon, the honey will not ferment. Honey ferments only when granulated. Dextrose crystallizes with two parallel sides, one slanted end and one pointed end which is not even. The crystals contain dextrose 90.90, water 9.09.

Yeast in honey can grow as soon as the water content is increased. In a solidly crystallized can of honey, there is not 15 per cent. which is really solid. The liquid phase always has a higher water content. Fermentation occurs in the late spring. Honey ferments which contains a water content down to 15 per cent. In samples, at the end of the second year, the loss was 20 per cent. Honey which is heated to 160 per cent. does not crystallize.

In three lots of honey produced from combs of different origin, newly drawn combs as a foundation produced coarse crystals, dry storage combs crystallized sooner and finer, but still coarse, but in wet storage combs, it crystallized in two weeks and was in a very fine crystallized form. In examining these combs, we found that on the wet storage combs small crystals had formed on this film of honey and when the new honey was put on these combs it formed seed crystals. When taken out, crystallization was rapid.

Honey can be heated to 160 per cent., sealed and kept for five years. It will form crystals in time and have larger crystals in the bottom. When honey is gritty, it is caused by crystals forming on the inactive end of crystals which forms stars. When heated, they will not entirely dissolve as they are too complex. When ground to produce creamed honey, it makes no difference as the crystals are broken up. They are very brittle. In grinding, air is incorporated which forms an emulsion. By using a darker colored honey, it will stay in the emulsion form a great deal longer. All this makes a great difference in flavor. The physical state makes a great deal of difference in the flavor of honey.

A ripened honey will not ferment in liquid form but will in crystallized form. In most countries, honey is sold as it is made and is soon in crystallized form. In Canada they decided if the people liked it that way, let them have it. Through this the sale of granulated honey began to increase. There was much fermentation. The climate was studied for the cause of fermentation. Methods were being modified in marketing and distribution.

At the Eaton Company Store in Toronto, Canada, I was asked to speak to the clerks on honey. They brought out a five pound can of honey and crackers, and found that the honey was fermented. We put the can of honey under the table and went to where a stack of honey was on display, of which we found that three out of every four cans were fermented. The people were buying fermented honey and unless they knew enough to bring it back, they would become disgusted in buying honey. There is more danger in buying creamed honey than in crystallized honey.

Whether or not the story is true of the honey being taken from King Tut's tomb, it would surely be black from standing so long.

Dr. Phillips: By heating rapidly and cooling rapidly, there is less chance of discoloration.

HONEY PRODUCTION IN OHIO AND MICHIGAN FOR 1935

By A. T. Keil

Mr. Keil spoke on Honey Production in Ohio and Michigan, from his travels in these two states, he judged that the amount of honey produced was about the same as in Pennsylvania. Ohio, in places, had almost an average crop, other localities a failure, while other locations about a 50 per cent. crop. Michigan, producing about a 50 per cent. crop. The early Spring rains brought out a fine stand of clovers including the small white or Dutch Clover, but about the 10th of July or shortly thereafter, the excessive cold rains for about four weeks kept the bees from sealing over sections and extracting frames, with the result that many beekeepers extracted a lot of uncapped honey, many heating this honey in flat pans for a few hours before placing in 60 lb. cans.

Most sections in Eastern Ohio are similar to those in Western Penna., but in my opinion the honey producing section is in the Northwestern part of Ohio, the Limestone Belt, where much clover is left stand for seed. The bees get a good crop of honey from the Alsike and finish up with the white sweet clovers. Due to the large amount of rain quite a few fields of spring seeded Alsike after the grain was cut came up so thick that it was left stand for seed, the last I

saw of it was cut for seed. I do not know if any seed was secured. The bees worked the clover very heavy, but just got a small amount of honey. This is the first year I ever saw newly seeded Alsike fields come up so profusely that honey was secured from the bloom.

The clovers in both these States are looking fine for a good crop of honey in 1936.

Mr. Keil does not like the flavor of Michigan honey as well as that from Ohio, Pennsylvania and New York States.

Michigan in the last ten years has spent nearly \$265,000 eradicating foul-brood. In 1935, 98,840 colonies of bees having been inspected. Of the amount spent nearly \$50,000 was appropriated by the counties. In Ohio inspection is only done by the Counties who appropriate money, the State appropriating sufficient to supervise the work.

Asked how Ohio compares with Penna. as a whole for yield of honey Mr. Keil advised he thought it would be about the same. In Ohio there are more beekeepers with large amounts of colonies, while in Penna. there no doubt are many more individual beekeepers with only a few colonies, but comparing Penna. limestone sections with Ohio Limestone Belt, would say that the average production of each probably would be 200 lbs. per colony.

In 1934 certain sections of Ohio secured a heavy honey flow from Alfalfa, which was missing in 1935, probably due to the excessive moisture.

Preliminary estimates, subject to revision, made by the Division of Crop Reporting and Information, Penna. Dept. of Agriculture, Harrisburg, Pa.

PENNSYLVANIA

Colonies of Bees January 1, 1935—113,700. Price \$3.62. Value \$447,340.
Honey Production 1934—2,935,050 lbs. Price \$.15—\$440,257.

Mr. Frederick Hahman, Chairman of Auditing Committee gave his report. "We have examined the books of the Treasurer and found them correct, the cash in bank is \$79.15. Also the report of the Publishing Committee is correct.

A motion was made, seconded and carried that the report be accepted.

The new President "Rev. H. M. Snavely, acknowledged the honor shown him and solicited the co-operation of the members of the Association. He said he would learn to do by doing."

Mr. Keil: Regarding giving money to the American Honey Inst. we have about \$130.00 on hand, \$79 at beginning of meetings, the balance paid in since, our expenses to date will be about \$100.00, which will leave about \$30 in the clear. We should give as much as we can for this good cause.

Mr. Anderson: We gave \$5.00 last year.

A motion was made and seconded to give \$10.00 which is twice the amount we gave last year.

Mr. John S. Fleck, Chairman of the Resolutions Committee, was called to Pittsburgh on account of the Railroad having trouble with excessive snow and drifts and could not stay, so the Resolutions were presented by Mr. Chas. S. Hess.

The motion seconded and carried that we accept these resolutions.

Mr. Anderson read a letter from the Board of Health to Mr. Glad saying that he was robbing his bees and making them light on the neighbors clothes. They asked that Mr. Glad please feed them.

Mr. Anderson read a letter concerning Mr. Murray, who passed away.

Mr. Keil: In trying to have the Counties appropriate money for inspection work, we would like to see a lot of counties begin on this this summer. Why not ask the County Commissioners in the Counties that the State expects to reinspect half every year thereafter, or every other year inspect the whole

County, thus after the state once gets the County thoroughly inspected leave it up to the County to keep it up, thus in time all Counties will be inspected yearly or every other year, and recommend that the Dept. of Agr. ask this of the Counties before inspecting them.

Mr. Kirk promised to use his influence to get a larger appropriation from the State and get more inspectors. He also recommended that we have a committee meeting together with the Sec'y of Agr. after the Farm Show.

Mr. Keil: Any objections to asking that the Counties inspect about every other year after the State has inspected?

Mr. Kirk: No objections if the County appropriates enough money to inspect the county every year or every other year. The State will do the follow-up work where disease and unlawful hives are found. The State wishes to have the work go on.

A motion was made to send a card to Mr. and Mrs. Morley Pettit of Bluefield Sanitarium, Bluefield, West Virginia, who were in an accident. Also write to Mr. Wm. H. Earnshaw, of Bridgeport, Penna., who has had an operation.

Mr. Keil: Mr. Keil wished to leave the thought that every member get a new member. He set a goal of 600 members for next year. There are 312 members now. Mr. Beaver was the one who suggested having space to write names on the badges you are wearing so as to get acquainted with members. What the officers want is more of these suggestions for the betterment of the Association, the officers do not know what the members want unless they speak up, we should all get back of the organization and feel that we are necessary to its growth, send news items, etc. to the Publishing Committee from all Counties of the state.

Mr. Kirk recommended meeting with the Sec'y of Agr. about a month after Farm Show, regarding appropriations for inspection like last year.

Mr. Anderson: Yes, a good idea.

The Committee was named as follows: A. T. Keil, Sec'y, H. M. Snavely, Pres., Charles S. Hess, C. H. Kohler, Floyd H. Sandt, Allen C. Trainer, Frederick Hahman.

Adjournment.

REVIEW OF THE SEASON

By E. J. Anderson

The dry season has made the yield from alsike clover very spotted. A few areas mostly the central and north western areas of the State obtained a good flow from this source. The honey obtained being nearly pure alsike clover honey. In the south central area of the State where alsike clover is generally at its best there was a very short crop due to excessive dry weather.

Towards the end of the alsike flow, rains occurred in many sections of the State causing the white or Dutch clover to take on new life. This clover developed in abundance and blossomed freely, and as a result bees have been harvesting the largest crop from this source that has been obtained for many years.

Sweet clover is not abundant as it is some years, however, there are areas such as Westmoreland County where it is unusually abundant and is secreting considerable nectar. Yellow sweet clover blossomed very early this spring. Some beekeepers in Cumberland County reported bees working on it before the locust came into bloom.

The honey obtained so far this spring is unusually light in color and fine of flavor, large quantities of it will grade white in color. This condition is always encouraging to the beekeepers since there are few things about the bees as aggravating as a large crop of off flavor honey.

At the time of writing the basswood and sumac were just beginning to grow in Tioga County. Walter David reported a good flow from these blossoms. The sumac generally blooms before basswood but the frost killed it in many sections of the northern tier counties so that it had to send out a second set of sprouts

causing the bloom to be late. In localities where both flowers are blooming at the same time there should be a very heavy flow.

Honey has been selling more rapidly at this time of year than for some years. Conditions as a whole are very favorable for good crop and a good market in Pennsylvania.

Many package bees are producing a very satisfactory surplus crop of light honey especially from the Dutch clover, the sumac and basswood and the sweet clover.

Many empty hives are being filled again with bees from swarms and from artificial increase. Swarming has not been as heavy as expected and as a result many hives will not be filled this season. The better beekeepers are also buying up bees in old hives to fill hives and make up for their losses. This should help considerably to improve beekeeping conditions over the State.

REMARKS FROM SECRETARY-TREASURER

A. T. Keil

The honey flow in Allegheny County and vicinity from Alsike, White Dutch Clover and White Sweet Clover was very good up to a week ago, some colonies having two and three supers of nice clover honey sealed, but today (July 13th,) the recent dry weather has stopped the honey flow, and if there is no rains soon the clovers will, no doubt, be scorched so it will not produce any more honey this year.

Allegheny County, South Park, Free Fair, will be Sept. 1-7 inclusive. Anyone having the time will be well repaid to visit this Fair, which is fashioned after the old-time fairs, with Cattle, Horses, Sheep, Fruit, Grain, Flowers, Grange and Individual Farm Exhibits, Etc., and no small part of this Fair is the Apiary Display, and no doubt as in the past, a beekeepers meeting right on the grounds. Anyone interested in attending the Beekeepers Meeting by writing me I will advise the date if we have it again this year. A fine program every day, Polo, Socker Ball, Horse Races, Etc., with free seats. I understand a parking charge of ten cents will be made this year. Labor Day usually brings out a crowd of about 125,000 people. Everything exhibited produced in Allegheny County.

BLAIR COUNTY NOTES

By Frederick Hahman

Blair County, along with other parts of our State, suffered in outright losses of colonies, as well as decimated stocks from the severe winter. To correctly diagnose the why and wherefor brought forth many and varied theories, however, all of that is now past history.

Our activities must center upon what we have saved, it is heartening to find how rapidly the salvaged stocks have built up into rousing colonies.

At the present time the writer is too busy to find out how the other fellow beekeepers are faring, no doubt they are also most busy.

We have had drought during the forward part of June that burned up the white clovers, but despite this apparent calamity, the bees stored much white honey. Since the belated rains arrived the flow of nectar has been in the shape of a deluge.

White and Alsike Clovers have taken on a new lease of life, blooming profusely a second crop. White Sweet Clover is also much in evidence the prospects of a good crop of light honey are good indeed.

Comb honey section boxes are filled and sealed rapidly taxing the energy of the apiarist to supply additional storage space. Some of the colonies are surely heading on toward swarming.

The section boxes filled so far are of the fancy type—snowy white and plump.

We hope that all of our fellow beekeepers are sharing in that which looks like a record crop of honey.

BUTLER COUNTY NOTES

By Paul Kuharic

The beekeepers of Butler County met at the community building in Butler on April 7th, 1936. After hearing a talk on "Winter Losses" by Prof. E. J. Anderson, State College, Mr. A. T. Keil and Mr. R. H. McDougal, Butler County Agent, helped organize the Butler County Beekeepers Association.

The following officers were elected:

President, Rev. William I. Gray, Prospect, Pa.

Vice-President, Eugene Hoffman, Star Route, Butler, Pa.

Secretary-Treasurer, Paul Kuharic, R. D. 7, Butler, Pa.

Annual dues \$1.00 per year which includes membership in Penna. State Beekeepers Association.

On Tuesday evening, June 23d, another meeting was held, at which time a constitution and by-laws were adopted and the date for the annual meeting was set for the second Tuesday in March.

Plans for a picnic were discussed and a committee was appointed to take charge of a honey display at our local farm show.

The business meeting then adjourned and was followed by moving pictures.



CENTER COUNTY NOTES

By A. R. Houser, Sec'y-Treas.

On March 11th, 1936, a number of beekeepers met in the office of the County Farm Agent, Mr. Ralph C. Blaney. Prof. Edwin J. Anderson of State College, gave a lecture on Spring Management and the introduction of Package Bees.

It was decided to form an association to be known as the Centre County Beekeepers Association, and the following officers were elected:

President—Max Miller, Hublersburg, Pa.

Vice-President—M. L. Breon, Millheim, Pa.

Secretary-Treasurer—A. R. Houser, R. D. 3, Bellefonte, Pa.

No members were taken in at this meeting.

Another meeting was held on May 7th, at this time Prof. Anderson was again on the job and gave a talk on American Foul Brood. At this time 15 joined the Association and we have a promise of 20 more before the summer is over.

We are planning a picnic to be held at Rockton, Clearfield County, some time in August, to which all beekeepers of Centre County are urged to attend.

HONEY CONDITIONS IN CUMBERLAND COUNTY

By H. M. Snavely

With heavy winter losses and many colonies suffering from weakness the beekeeper had a difficult problem to face this spring. Many of the empty hives were supplied with packages of bees from the South. The package bee shipment to this locality was heavier this year than formerly over a period of several years. A number of beekeepers resorted to strengthening weak colonies by adding queenless packages; where this was done the beekeeper is amply repaid in the surplus of honey harvested for his investment. A few beekeepers report little or no loss, while others have experienced very heavy loss. However, all yards suffered to some extent from weakened condition; so much so that in many cases the bees were not ready, or built up to normal strength at the beginning of the honey flow. In my own apiary I find one of the best investments that I ever made in beekeeping was several two-pound queenless packages, each divided with two colonies early this spring. Of the bees that weathered the winter, they are the honey producers just now.

Spring conditions were rather favorable in this locality. The fruit bloom was heavy and weather conditions just about right. The locust bloom in our vicinity was much better than last year, while in some parts of the county it was not as good. Sweet clover came in a little early. Probably two weeks before the bees were ready for it due to the severe winter conditions, and probably a cool spring. Extreme dry weather retarded the flow for several days during June. The white sweet clover is now blooming and weather conditions are much more favorable to a good honey flow. I believe the crop as a whole will be larger than last year. Comb honey production is better due to the rapid flow of recent days. So far the color of the honey is very light, and climatic conditions insure a better body. So it looks like the Cumberland Valley will have a fine quality of both comb and extracted honey to harvest this season.

Bee behavior is an interesting study this season. I think the bees are unusually gentle at most times. There is practically no swarming at all. We find very little preparation to swarm. There appears to be less deposits of propolis in comb honey production. Cappings are for the most part white. I find less watery cappings than in the season previous.

A 4-H Club was organized with seven members here and combined with the club of last year of the northwest end of the county. Most of the members started with package bees.

The County Association plans a program and field day August 5th at Mt. Holly Springs park. We are planning to have Mrs. Jensen, of the American Honey Institute, to meet with us on that day. Others on the program will be Mr. E. J. Anderson and Mr. H. B. Kirk. We are inviting the beekeepers from adjoining counties to enjoy the day with us.

LEHIGH COUNTY NOTES

By Mrs. H. W. Dennis

Maybe there is not so much heard of the Lehigh Valley Beekeepers Association but like the bees they are quietly active. We gather from latest reports that last year's honey crop is sold and the beekeepers are anticipating the new crop which maybe a fairly good one owing to weather conditions earlier in the season, namely, a very dry spell followed by a wet spell, which kept the bees on "inside jobs." Through the co-operation of the Fruit Growers and Beekeepers the committee who conferred with the County Commissioners for appropriations for eradicating bee diseases in Lehigh County were granted an amount which made it possible to have an inspector for this territory. Inspection is deemed of great importance and the beekeepers are grateful to the Commissioners for their kindness. Mr. John E. Renner, of Emaus, Pa., Route 1, and a member of the Association, is conducting the work efficiently.

June 18 a field meeting for all beekeepers and arranged by County Agent A. L. Hacker was held in the apiary of Wm. I. Weaver, near Macungie, Pa.

Mr. E. J. Anderson, Bee Specialist, of State College, spoke on Swarm Control.

July 11th the Lehigh Valley Association held a meeting in the apiary of Floyd Sandt, Wagner Orchards, Easton, Pa., Route 2.

The following is a report of banquet taken from the "Allentown Morning Call":

FRUIT GROWERS AND BEEKEEPERS DINE TOGETHER

Annual Dinner Held in Fire Hall at Schnecksville

An illustrated talk by R. S. Kirby, plant pathologist on the agricultural extension staff of Penn State College, was an instructive part of the program enjoyed Friday night at the conclusion of the annual dinner of the Lehigh County Fruit Growers Association and the Lehigh Valley Beekeepers Association in the hall of Community Fire Co. No. 1 of Schnecksville. Close to 100 members and guests of the two organizations were present.

By means of a series of time exposures taken at various times during the life of different species of plants, Mr. Kirby was able to show the development not only of the plants but also of the fungi which attack them. This growth, which is not perceptible to the human eye, can be seen clearly through the medium of these pictures.

Another speaker was E. J. Anderson, bee specialist of State College.

The program also presented a number of entertainment features, including vocal selections by Charles H. Kline, this city; two humorous Pennsylvania German readings by Mrs. Horace Reichelderfer, comedy by Ralph Kahler, musical numbers on novelty instruments by Lloyd I. Miller, and accordion selections by Richard Blose.

Particularly at this time of the year is the association close between the fruit growers and the beekeepers. It was explained that many fruit growers who have no bees, borrow them from beekeepers to assist in the pollination of fruit blossoms. Most apples are fertilized only by this means.

Officers of the two associations are: Fruit Growers, William Haas, of the Overlook Orchards, Coplay R-1, president; A. L. Hacker, secretary-treasurer; Beekeepers: Thomas Berky, Easton, president; Mrs. Howard Dennis, Allentown, secretary.

MONTGOMERY COUNTY NOTES

By Charles Hoser

We had Montgomery County meeting on June 13 at the Jas. H. Davis Apiary, West Conshohocken, Pa., and there the bees have been bringing in lots of nectar. Mr. Davis has taken off some comb honey and has more in the hives and will probably have a good crop. Others report lots of honey coming in around the lower section of Montgomery County and over in Chester County, but as Pottstown in the upper end of Montgomery County, Mr. Reigner reports a poor crop and he usually gets a lot of honey. Some hives I have been attending to will have considerable surplus. At Valley Forge, where I have two colonies, one has followed last year's precedent, lost its queen and started laying workers and I can not deal with it until July as I will be away.

Most reports indicate a good crop of honey. A beekeeper living two miles below here reports taking off 50 gallon of honey already from 20 colonies but dark in color. Most that I have seen seems to be light amber.

Our meeting had the usual attendance of about 25, but rain hindered a full inspection of the apiary of about 30 or 35 colonies.

Winter losses heavy. One man here today lost 60 per cent.—6 out of 10.

NORTHAMPTON COUNTY NOTES

By Floyd Sandt, Easton

In replying to your letter of June 16. The honey flow up to present I would

say is about normal, the bees and the honey plants are both in fair condition. They are filling up the empty hives which died off last winter, as I am beginning to sell new hives.

The market for honey is better this summer than any summer that I can remember.

Hope to see you on the eleventh.

TIOGA COUNTY NOTES

By Walter A. Doud

The honey flow from clover started here early in June. It has been rather slow and irregular. A hive on scale shows daily gain from nothing. Some days to 7 pounds for best day. We need more rain and warmer weather. However, strong colonies have stored quite a little surplus, probably 40 lbs. for the strongest. Colonies that came thru the winter weak did not build up satisfactorily and did not take advantage of honey flow at the start. Basswood does not seem to have been injured by late freezes. Swarming has not been as bad as could be expected.

Honey sales for June have been the best in our experience and honey is nearly sold out. The self-serving roadside stand is starting its third year and is a good salesman. I have every reason to believe that the traveling public is honest.

BRADFORD COUNTY NOTES

By Harry W. Beaver

Time and tide wait for no man, and thus it seems this summer in bee keeping. When we saw about what the winter loss would be we decided to try out the packages in comparison to wintered-over colonies. So I ordered 100 two pound packages from various dealers in the south. Well we find that they compare favorably with the weak wintered colonies. We can see very little difference in strength of those we received late in April or those received as late as May tenth. I think the reason was that the late frosts in May chilled brood in all alike and thus evened them up. The bees that came in the packages seemed to all die off and they came to a standstill about June first, then gradually gathered strength till now, July twentieth, they have bees enough to fill an eight frame hive and super, but too late for the clover or basswood, but will be about right for buckwheat. The increase made from the strong wintered colonies are about the same strength, so that taking it by and large the packages were not as satisfactory as expected. I certainly would not advise killing the bees in fall and replacing with packages as some of our western friends tell us they are doing. Locality, I suppose, explains it.

Our clover flow lasted about a week, then slacked rapidly off, and the basswood flow did not materialize. Some yards flavored the clover and others did not even do that much. So our good prospects passed into oblivion and we have about half an average crop of clover.

Myself and family visited the Jersey beekeepers and joined them at their summer picnic at Glen Gardner in the apiary of Albert G. Hann. They were having a good flow from Sumac, a plant that does not seem to give much honey in this locality. Mr. Hann demonstrated how to make a swarm box and grafting queen cells and putting them in the box for development.

Mr. Carr, Mr. Holcomb and others spoke on various subjects of interest. We also stopped off at Glebes road stand, which cost around \$12,000.00. Mr. Glebe showed me around the place of about fifteen acres. A truly beautiful place. Mr. Glebe is an idealist and believes in making his place as near as a paradise on earth as he can make it. I also noticed a sign (no intoxicants allowed on these grounds). He and his wife strive to serve the unusual in luncheons and cater to the better class of tourists.

They get a lot of pleasure as well as profit out of their business and why not.

We also took a turn out into York State. Things are dryer there, if possible, than they are here. There will be a very small acreage of buckwheat through the lake region where most of the buckwheat honey is produced. Fruit is scarce or absent altogether. They will have a fair crop of clover honey which is one ray of sunshine for the beekeeper.

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THE PENNSYLVANIA BEEKEEPER



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Prepare Your Exhibit for the Farm Show

Final plans for the honey exhibits should be made soon so as to have as usual an excellent exhibit of honey and wax at Harrisburg. The honey exhibit has improved both in quantity and quality for a number of years and it is hoped that this growth will continue.

There is one outstanding change and it is a rule to the effect that notices of all entries for both individual and county collective exhibits be sent to the Director of the Farm Show before December 1, 1936 so that the space for collective exhibits may be divided equally. This rule will also give the exhibitors an opportunity to adopt their exhibit to the allotted space and in that way should help materially to improve the collective exhibits. Entries for individual exhibits may be sent in as usual. The premium lists prepared by the Farm Show Commission will give full particulars regarding the exhibits.

HONEY COOKERY CONTEST

The American Honey Institute is conducting again this year a honey cookery contest open to the wishes of all beekeepers. Any one who may wish to make entries should write at once to the American Honey Institute, Madison, Wisconsin for particulars and an entry blank. There are entries for Honey Fruit and Nut Bread, Honey Fruit Butter and Honey Fruit and Nut Candies.

The prizes are rather large beginning at \$25.00. All cooked products with recipes must be at the annual meeting place which is San Antonio, Texas, (this year) by November 20th.

STATE BEEKEEPERS FIELD MEETING

By H. B. Kirk, Harrisburg, Pa.

The Pennsylvania State Beekeepers Association held its Annual Field Meeting at the Morris Arboretum, Chestnut Hill, on August 27, 1936.

Due to threatening weather conditions in the morning the attendance was not as large as usual, there being about 120 beekeepers and friends present.

The grounds of the Arboretum and arrangements made by Mr. Elmer Reustle and Mr. John Buseman were ideal for a beekeepers' picnic.

Due to the absence of our President and Vice President, Reverend Snavely and Professor Anderson, it was necessary to select someone to act as Chairman for the afternoon meeting. After some hesitation Mr. Reustle reluctantly agreed to act in that capacity and he conducted the meeting in a very able manner. Many regrets were expressed by the beekeepers of the absence of Professor Anderson who was suffering from a serious disability at that time and hoped that he would fully recover in a short time.

We were glad to have with us, however, Mr. Elmer G. Carr and Paul L. Holcombe of New Jersey. The Pennsylvania beekeepers always appreciate the interest they take in our Pennsylvania meetings.

Mr. Frederick Hahman, Altoona, Pennsylvania, first president of the Philadelphia Association and charter member of the State Association and one of our oldest and most beloved beekeepers in the state was present. May he be spared to attend many more of our State and County meetings.

Mr. Harry Brown, of Cape May Court House, New Jersey, who has attracted a lot of attention the past two years with his "stingless bees" was also present and "stole the show" in the morning. Many photographs, which were afterward used in the daily papers, were made of his bees by the publicity men. Mr. Brown does not claim that his bees are stingless but that they are the most gentle bees known at the present time.

The speakers on the afternoon program were Elmer G. Carr, retired Chief Apiary Inspector of New Jersey and Paul L. Holcombe, his successor; Charles Hallowell, Farm Agent, Philadelphia County; John O. Buseman, Philadelphia County; Elmer F. Reustle, Philadelphia County; A. C. Trainer, Beekeeper Trexler Farms; Thomas E. Berkey, Northampton County, Frederick Hahman, Altoona, Past President of the Philadelphia Association, and others.

While we were disappointed in not having all speakers on the program present, we had a very enjoyable and interesting meeting. It was especially interesting when a nest of yellow jackets was discovered in the grass among the chairs at the speakers' stand. Beekeepers can take a lot when it comes to bee stings but what a respect they showed for these yellow fellows when they became active.

Directly after the meeting we were conducted through the Arboretum and observed many rare and interesting plants.

Thanks are given to Mr. Reustle and Mr. Buseman for making satisfactory arrangements and selecting such a fine place for our field meeting.

ADDITIONAL NOTES ON THE STATE MEETING

By Frederick Hahman, Altoona, Pa.

President Reustle, after stating his pleasure to see so large a gathering of beekeepers on hand, introduced Mr. Charles Hallowell, Agricultural County Agent for Philadelphia, who made the address of welcome, speaking for Mr. Rodney H. True. He told the members that the Morris Arboretum was one of the finest in our land in some respects outclassing the renowned Arnold Arboretum of Boston.

Mr. Harry B. Kirk, of Harrisburg, Chief Apiary Inspector of Pennsylvania,

gave a general outline of conditions of the past season, the flora of the state, and the honey flow, which had been a satisfactory one.

Mr. D. Triester, President of the United Business Men's Association, made an address brimful of humor, but declared that he preferred to leave the handling of bees to others.

Mr. A. Lasche, a director of the same association told the members of the activities and responsibilities of their President, Mr. Elmer G. Reustle, who was truly a busy man in the municipal affairs of the City of Philadelphia.

Mr. Elmer G. Carr, the next speaker, former Apiary Inspector of New Jersey, stressed the magnificent work, the American Honey Institute was accomplishing. He urged all his listeners to give unstinted financial support to further the usefulness of the Institute.

Mr. Wm. Gault, Chief of the Electrical Bureau of Philadelphia, substituting for Mayor S. Davis Wilson, read an address of welcome from the Mayor, who was unable to be on hand, on account of pressing business of a City Council meeting. Mr. Gault gave some of the high points of the magnitude of the Electrical Bureau of the City of Philadelphia.

President Reustle, introduced Mr. Frederick Hahman, now of Altoona, as the only living charter member of the Philadelphia Association and its first Secretary. Mr. Hahman voiced his pleasure to have the opportunity to again stand facing the Philadelphia members as he had done so many times in the past. He complimented the Association for its fine showing of lady members. He said the first meeting was held on January 23, 1882, at the residence of Dr. Henry Townsend, 1514 Vine Street, Philadelphia, with eight men present. He wrote the minutes of that meeting and continued as secretary for 29 years. The Philadelphia Association prospered from the start and soon had a goodly number of lady beekeepers in its membership. A few of the outstanding events of record were: The Honey and Wax Exhibit, sponsored by the Association at the Pennsylvania State Fair in Philadelphia in 1884. Another noteworthy fact occurred during the visit of Mr. Wm. Cowan, to the United States. He was the editor of the British Bee Journal. On invitation he attended one of the meetings of the Philadelphia Association. In a subsequent issue of the British Bee Journal he paid high compliment to the Association, stating that in Philadelphia he met the most scientific body of beekeepers on his trip.

Another memorable event in the career of the Philadelphia Association was the entertainment of the National Association which met in Philadelphia in 1899. The meetings were held in the Franklin Institute. It was a large gathering of beekeepers from many parts of the United States. The officers present were: President Mr. Whitcomb of Nebraska; Secretary Dr. Mason of Toledo, Ohio, Hon. Eugene Secor of Iowa, Treasurer. Some of the others in attendance included: Dr. C. C. Miller of Illinois, E. R. Root of Ohio, W. Z. Hutchison of Michigan, Mr. Stone of Illinois, L. C. Root of Connecticut. Both of Messrs. Coggsall of New York and a host of other New Yorkers.

During the Convention, Dr. C. C. Miller sang "The Hum of the Bees in the Apple Tree Bloom," with music composed by himself. The song was the work of Mr. Secor. A copy of the words and music of this song can be found in the minute book of the Philadelphia Association.

Mr. Wm. E. Flower, Vice-President of the Philadelphia Association gave a lantern slide exhibit of bee subjects and views of the apiaries of the members. It was the first of such an exhibition before a meeting of beekeepers.

Mr. Hahman closed his remarks by wishing the Philadelphia Association a long life and success in the future.

Mr. Henry Brown, of Cape May Court House, New Jersey, told of the development of his gentle strain of bees, that he had developed by careful line breeding. The swampy treeless meadows of South Jersey where no wild bees are to

found, also no beekeepers to interfere, gave him opportunity of selecting colonies with desirable drones for mating purposes. Strange as it may seem, Mr. Brown stated that one of the strains he had used were Cyprian bees. Mr. Brown had several letters read from purchasers of his bees, stating that they were excellent honey gatherers. Mr. Brown exhorted the beekeepers to contribute to the American Honey Institute's good work and finally produced four of his queens to be auctioned off, the proceeds to be given to the Honey Institute. The queens brought higher prices than Mr. Brown sells them for, the last of the four, fetched \$2.50.

Mr. Harry B. Kirk then gave a detailed report of the work accomplished in bee inspection in Pennsylvania, stating that an increased appropriation had enabled him to place more inspectors on the job.

Mr. Wakeman, of Norristown, invited the members to the Montgomery County meeting.

The meeting was adjourned to take a trip through the Arboretum. A rare treat to see the trees and shrubs growing there, all correctly labeled. The specimens having been gathered from all parts of the Temperate Zones of the world.

REPORT OF SURVEY MADE DURING NATIONAL HONEY WEEK

NOVEMBER 1935

By Rev. H. M. Snavely

In making preparation to observe National Honey Week of 1935 it was thought that it might be helpful to the beekeepers in general to make a survey. The survey was arranged by the help of the County Agent, Mr. W. Irwin Galt, and under the direction of Mr. E. J. Anderson, Bee Specialist of State College. The survey was made of the stores in three of the principal towns in Cumberland county. Following is a summary of the survey: Thirty-four stores were visited. Only 65 per cent carried extracted honey, and only 21 per cent carried comb honey. 64 per cent carried honey produced out of the State, and only 36 per cent handled honey produced in the State. 43 per cent of the stores visited carried honey which had crystallized. Only 4 stores carried comb honey wrapped in cellophane. Two stores carried honey that was damaged by wax moth. The average price per pound for extracted honey was 21 1-2 cents, and the average price per section of comb honey was 17 1-2 cents. There were 13 different sizes of containers found.

One of the things revealed in this survey that should arouse beekeepers is that nearly twice as much honey is carried from out of the State as that produced within the State. This condition certainly is an indictment on the local beekeeper, and should be at least in some measure corrected. Of course we can't stop stores from buying out-of-state products; but we can make an effort to stock stores with our product; and when we do it, it should be of the finest sort.

Another important matter is the comb honey situation. Can we be surprised if no one wants to buy comb honey when it is leaking, damaged and unwrapped? Comb honey is a fancy product and should be put up in a fancy style. There is nothing that will tease the appetite more than a nice section of comb honey, thoroughly cleaned and wrapped in clear cellophane.

Since the above survey was made some of the stores have been stocked and are kept supplied with fresh honey put up in proper shape. Here is an opportunity for the beekeeper.

One more item of interest as revealed in the survey was the many different sizes of containers. It is the feeling among a number of beekeepers that a standard size should be adopted; and then stick to the standard. I believe the beekeeper who uses as many different sizes as the number of stores he supplies will soon find himself out of customers. I believe it is a breakdown in beekeeping ethics as much as the price-cutter. In the long run it doesn't pay.

This survey was very helpful in that it set some of us to work in our own community, and some of the foregoing conditions are being corrected. In my own community I began to supply a road-side market early in June. Since then and to October they have disposed of 276 pounds of extracted honey, in pound jars and five-pound pails, and 224 sections of comb honey. Every section is cleaned and wrapped in cellophane.

LOSSES FOR THE WINTER OF 1935-36

By Edwin J. Anderson

The losses for the past winter were undoubtedly the heaviest for a good many years. These losses were brought about by a series of unfavorable conditions for the bees all of which are seldom grouped into one winter.

The most serious of these conditions was the presence of a large quantity of unripe nectar in the brood chamber. The unripe nectar made the inside of the hive more or less damp and also made the food unhealthful. Excess moisture encourages the development of adult bee diseases especially dysentery. This is due largely to the inability of the bees to get rid of moisture during the winter months.

The heavy snows confined the bees to their hives and prevented a flight on days that would have been sufficiently warm were it not for the presence of the snow. Ordinarily the snow is of value to the bees since it acts as winter packing, but last winter it caused the bees to be confined to their hives for several months. In many cases the dead bees accumulated at the entrance so as to close up these entrances and caused the bees to die of suffocation. In other hives the bees died of dysentery.

The heavy fall honey flow of 1935 retarded brood rearing, as it is doing again this year, and caused the bees to go into winter quarter short in numbers of young bees. When spring came the bees dwindled rapidly and many that should have come through in good shape either died out or became weak for lack of young bees.

The final result of all these adverse conditions was a winter loss for Pennsylvania of 42 per cent, as shown by records taken from one hundred apiaries in the different sections of the state. The interesting fact is that the losses for unpacked colonies was 45 per cent while the losses in apiaries where the bees were packed dropped to 15 per cent. This was a great saving for packed colonies especially is this true when we consider the excellent flow which we had during the past summer.

It is a question as to whether packing pays over a period of years when results of this kind are obtained from packed colonies during an occasional year when they must go through winter under the most adverse conditions.

A group of the records are shown below so as to give a better idea as to the

conditions as they were found. The records for all the apiaries are not given because of limited space.

WINTER LOSSES

County	No. in Fall	No. in Spring	Wind Pro- tection	Re- queened	fed	Packed
Forest	48	18	no		no	
Forest	11	2	no		no	
Forest	28	4	no		no	
Forest	3	1		no	no	
Forest	4	0	yes	no	no	
Forest	12	8	yes			yes
Clarion	4	1	no		no	
Clarion	5	1	no		no	
Clarion	14	12			no	
Clarion	16	15	yes	no	no	
Clarion	92	72	yes			yes
Clarion		5	no		no	
Lackawanna	36	33	yes			yes
Lackawanna	19	15	yes			yes
Chester	40	38	yes	yes	honey	yes
Berks	40	12	no		no	
Chester	30	12	no		no	
Monroe	60	58	yes	yes		yes

ALLEGHENY COUNTY NOTES

By A. T. Keil, Secretary

This has been rather a queer year in this county. The early rains started Alsike and White Clover blooming profusely, and quite a crop of honey was secured, but the dry weather in July dried and killed the clovers. (Last Summer it was too much rain and cold). Quite a lot of Buckwheat honey was secured in the Northern section of the county. Dry weather discouraged many from planting buckwheat. Goldenrod produced very good flow and, wild asters are now producing fine and will until killing frosts destroy the blossoms.

Beekeepers should not forget to save some of their best honey for display at Harrisburg week of Jan. 18th, and be sure and attend the meetings Jan. 20th and 21st. The program is being made up—anyone having suggestions or recommendations about the subject and speakers please write the Sec'y-Treas. at once. If you will give a talk advise the subject and if not too late, will schedule it in the program.

Your Sec'y-Treas. is putting in about sixty-hours a month with no pay, no doubt other officers and Publishing Committee are doing the same. Surely you can put in a few hours and secure a new member or two. Think it over, or better yet, get out and get and send in two or more memberships and I know you will feel better in having taken part and helped build up your Association.

More counties should start Associations, some beekeeper in the county where there is no Association should see their County Agent and get the bee-

keepers together and organize. If the beekeepers show an interest, I know the County Agent will help. The latest county to join with the State Association is Fayette County, previously we did not have a member in that county, now we have 26. Surely you must agree it is worth the trouble to get an Association started in your county. In the next issue of the Penna. Beekeeper I expect to list all counties having Associations, their membership, etc. Is your County on the Map?

I am pleased to announce that we will have as a speaker at our Annual Meeting one of our Old Timers, one who joined the Penna. State Beekeepers Assoc. when it was started and has paid dues ever since, later did good work for the beekeepers in a state job, and now Asst. Professor of Apiculture at Cornell University, you guessed it. None other than Prof. Geo. H. Rae, who will give us several talks.

Dr. W. J. Nolan, Bureau of Entomology, Washington, D. C., will judge the Apiary exhibits and give several talks.

BUTLER-ALLEGHENY COUNTY PICNIC

August 18th, 1936

The Beekeepers Picnic was held at Treesdale Farms, near Mars, Pa., Butler County Beekeepers inviting Allegheny County to join with them. About one hundred attended and all reported having a good time.

Mr. R. H. McDougall, Butler County Agent, took charge of the morning meeting, and Mr. H. R. Eby, County Agent of Allegheny County, the afternoon.

Due to the illness of Prof. E. J. Anderson, Mr. Paul Kuharic gave a demonstration of placing foundation in split sections. Mrs. McDougall demonstrated wrapping sections in cellophane, and A. T. Keil the bag wrapper.

Paul Kuharic gave a fine talk on 4-H Club work.

Mr. Keil gave a talk on Raising Queens and answered beekeeping questions in general.

Mr. Eugene Hoffman, Vice-President of Butler Co. Beekeepers Assoc., gave the address of welcome, which was responded to by Mr. John S. Fleck, Pres. Allegheny County Beekeepers Association.

Mr. L. H. Hawthorne, of New Castle, gave a splendid talk on "Marketing of Honey."

Mr. F. G. Reiter, Mgr. of Treesdale Farms, gave an excellent address and welcomed the beekeepers to Treesdale.

Mrs. R. H. McDougall had charge of the games and contests.

David Horne, of Butler County, won the smoker contest, a smoker donated by the I. W. Scott Co., of Pittsburgh.

It was decided to make this picnic an annual event, inviting all counties in Southwestern Penna. Representatives from five counties were present.

ERIE COUNTY NOTES

By E. E. Root

The honey crop in this section is very poor up to date (July) as there has been very little rain and the long drawn out dry weather. There is little or no

clover honey to speak of even though there was lots of clover blooming this year. The basswood yielded almost no honey this season. There is some honey being gathered from sweet clover at present time, but will be very short on the account of no rain. The blossoms dry up almost as soon as they open.

The honey that is being gathered is of a very fine grade of honey and very light.

The prices are of the uniform price—clover from 18c to 22c per pound.

Swarming has been very limited.

The honey flow this fall has been the best that we have had in the last three years. I have some hives that have produced four supers while the average has been three. Buckwheat has not been so good as the dry weather kept lots of buckwheat out of the ground so therefore the flow was below the average, but the goldenrod made up for that. The aster flow is pretty good since the weather condition has been ideal for the gathering of nectar.

The markets have been very good. There has been very little outside honey sold here. The price has not changed over last year's price ranging from 15c to 20c for comb honey and from 60c to 75c for extracted honey in 5-lb. pails.

The American foulbrood sure has taken its toll in this part of the state. Judging from the amount of it in the apiaries I have visited I would expect the losses this coming winter will be large as many colonies will not be in very good condition to go through the winter. We had our first frost last night and it was not very heavy and did no damage at all.

LAWRENCE COUNTY NOTES

By Louis H. Hawthorne, New Castle

September 25th and no frost yet. A good supply of Smart weed, (Hearts-ease), Spanish Needles, (burr marigold), and nectar bearing golden rod keep the bees busy early and late. There is a good second blooming of white sweet clover, though it probably does not secrete much nectar now.

Late cucumbers, melons, and pumpkins are especially attractive now. There is not as much buckwheat as usual this year. It makes very little difference to the Lawrence County beekeeper as nectar is but rarely secreted in sufficient quantity for a honey crop. Just enough sometime to produce red and white sections and a queer shade extracted honey.

Asters are blooming somewhat earlier this year, I think. The indications are that after a killing frost there will not be the heavy aster bloom that there was last year.

The Fall honey flow has been so heavy and steady that many beekeepers have allowed their supers to fill up and force the bees to store too much in the brood chamber. I have observed many colonies that would not average 1 1-2 to 2 frames of brood in the middle of September. The hives were choked up with honey. The lack of young bees will mean "dwindling out" next spring.

A. F. B. is scattered around everywhere. Over sixty per cent of the apiaries I have looked at this fall have from one colony to a complete infection. Sac Brood has been rather plenty everywhere, but not in alarming quantities.

There has been very little good section honey produced here and the price is at least 1/5th higher than last year.

Our largest comb honey producer is selling his whole crop of early honey at 12 cents per section IN THE SUPER. The purchaser does the cleaning and

returns the unsalable sections. I have not as yet seen any sections selling for less than 18 cents retail. One of the big chain groceries is selling at 22 cents. The retail price will probably drop to 12 1/2 cents soon.

Some ten or twelve extractors over the County have been busy all summer. Three of them will probably produce over a ton each, the others may average 500 pounds each.

The heaviest flows have been along the river valleys and slopes.

Most of this honey has been well ripened before extracting and is of good body. Thousands of pounds are being sold in Ohio districts where a few years ago we got our best white honey. A. F. B. cleaned-out whole Counties there.

The larger producers are packing in five and ten pound pails, most of it in the ten pound size. The can and label cost about one and one-fifth cents per pound of honey. Most of this wholesaled at one dollar a pail (10 lbs.). The producer gets about 8 1-2 cents per pound.

The five pound pails generally sell for seventy-five cents. This same honey packaged in glass sells for 50 cents to 60 cents per quart and in smaller quantities sells to realize 20 to 25 cents a pound.

Like many other parts of the world, our people have very little cash to spend at any one time.

A 25 cent or 20 cent, or better yet a 10 cent package of honey will sell readily, when for even half the price per pound, a dollar package can not be sold at all.

LEHIGH COUNTY NOTES

By A. C. Trainer

Lehigh County as a whole has had a wonderful honey flow of short duration. The honey is light in color and is very heavy bodied, in fact, we broke more combs in our big extractor than in any former two seasons put together.

We had a local beekeeper for a bee inspector in our county. His work was very satisfactory.

It is interesting to note that the severe winter just past reduced the colony population to half that of year before. However, we still have 2,237 colonies left and most of them in the hands of careless beekeepers.

The Lehigh Valley Beekeeper Association had on display at our local fair a pyramid, such as was described by Dr. Phillips at the Farm Show. We heard many expressions of, "Oh, look at the beautiful honey!" We also had many inquiries as to where the honey could be bought. It took 113 jars to build it to a height of 6 feet. There were three 100-watt light bulbs placed in a reflector throwing beam of light to top of the pyramid.

Right now we are busy taking off the last of the honey crop and hope to be finished by the time hunting season arrives.

NORTHAMPTON COUNTY NOTES

By Floyd H. Sandt

Our crop of honey has been the biggest ever. Fortunately the local markets are very good so that it will not be necessary to sell much of this honey in the wholesale channels.

Aster honey has been coming in strong until the heavy frost today. There are plenty of bees in the hives so they should go into winter quarters in good shape.

REVIEW OF THE SEASON

By Edwin J. Anderson

The yield from buckwheat has been only fair, many sections such as Cambria County obtained almost no surplus from this source. Other sections obtained a fairly large surplus. Several beekeepers of Centre County harvested this year the first surplus of buckwheat honey obtained for many years.

The fall flowers have again produced a good surplus over most of the state. This flow, however, has not been as steady as it was last year, since several periods of rain and cold weather have interfered to a considerable extent with work of the bees.

The Prickly Ash or Devil's Club yielded a large surplus of bitter honey. As one travels through the Allegheny Plateau the large purplish-red clusters of berries produced by this plant are much in evidence. Many of the beekeepers are planning to feed large quantities of this honey back to the bees for winter. The honey is ideal for this purpose since it is too bitter for table use, but makes a good quality of food for winter stores. The bees seldom suffer from dysentery when they are wintered on six or seven frames full of the bitter honey.

Swarming was unusually heavy this fall, in many cases the swarms were unexpected and left for the woods. This late swarming will cause many colonies to go into winter short of young bees. The heavy late flow has caused considerably crowding of the brood chamber, also causing a shortage of young bees for winter. The shortage of young bees may cause heavy spring dwindling unless there comes a period of warm weather later in the fall when brood rearing can be resumed. Extensive late brood rearing can not be depended upon since it occurs only once in five or six years. The weather must be unusually warm if brood rearing is to occur to any appreciable extent during the last of October or early November.

Very large crops of honey have been reported this year for individual colonies. These reports have come from widely separated sections of the State. One beekeeper from Cambria County reports 360 pounds from a single colony. Several similar reports have come from Delaware County where a heavy flow from March Marigold and other fall flowers was added to a large surplus crop of spring honey. Reports of this kind are encouraging coming as they are after the discouraging results of last winter.

The honey markets continue to be active with a good demand for both comb and extracted honey. Prices are generally above those of last year. Wholesale prices being proportionally higher than the retail prices. Large crops are depressing local prices in a few communities. This condition would be unnecessary if the surplus was properly graded, packed and shipped into the large markets where honey appears to be more in demand than usual.

Excellent results were obtained during the past season from package bees. Many reports have come in of surplus of over 100 pounds per colony where the packages were fed and did not suffer any severe setback such as the loss of a queen. The late honey flow from Dutch or White clover helped a great deal to bring about this condition. Wild flowers such as sumac, goldenrod, silverrod, wild aster and marigold also helped to bring up the average of package bees.

Extracts from the Semi-Monthly Report of the United States Department of Agriculture for September 16.

PHILADELPHIA: Extracted, 5,400 lbs. Calif., 2,700 lbs. Ga., 36,707 lbs. Ill.; comb, 12 cases Va. arrived.

EXTRACTED: Supplies moderate. Demand fair, market about steady. Sales by brokers to jobbers, confectioners and wholesale growers—ILLINOIS, blended White Sweet Clover and Basswood 3-lb. jars \$4.25-4.50 per doz.; 5-lb. cans \$6.50-6.75 per doz.; 10-lb. cans \$13.00-13.50 per doz. Sales by receivers to manufacturers, bakers and confectioners—CALIFORNIA, White Orange 7 1-2c, PUERTO RICO, Light Amber in barrels 70c per gal.

COMB: Supplies light. Demand fair. Sales by receivers to retailers—PENNSYLVANIA, White Clover, cellophane-wrapped fancy 13-15 oz. \$4.75-5.00; No. 1, 11-12 oz. \$4.00-4.50.

BEEWAX: Approximately 2 tons Southeastern and 2 tons Africa arrived. Demand slow, market about steady. Sales by receivers to manufacturers—AFRICA, Yellow 25-27c per lb. SOUTHEASTERN, Yellow 28c per lb.

PITTSBURGH: Arrivals by rail and truck, extracted 3,680 lbs. Mich.; 1,180 lbs. bottled Midwestern.

EXTRACTED: Supplies moderate. Demand slow, market steady. Brokers sales to jobbers, bakers supply houses and large bakers—MICHIGAN, White Clover 8 1-4-8 1-2c, Light Amber 7 1-2c. MIDWESTERN, White Clover 1-lb. jars \$1.60-1.70 per doz.; 14-oz. jars \$1.45-1.55 per doz.; 5-lb. pails \$6.00-6.50, mostly \$6.25-6.50 per doz.

BRADFORD COUNTY NOTES

By Harry W. Beaver

Honey: the stuff that makes the wheels go round for the bee man. We were disappointed in our clover crop. Then came along a dry spell over part of our territory and wet on the other part and the honey came early on the wet part but none on the dry section, then rains and honey and more rains and more honey and more rains and still more honey, and not having super room enough we extracted and returned the supers and were agreeably surprised to see them filled again. Some yards that we put supers on after buckwheat was out of the picture, filled them with the finest white honey we took off this season—pure goldenrod.

We were compelled to take several combs out of our second story brood chambers in order to give the bees place to cluster and room for breeding next spring as most of them were full to the bottom board, crowding out the brood, which will not make them winter any better.

I notice when there is a late flow that the bees do not winter so well on account of there being less brood and too the bees seem to wear themselves out working before cold weather sets in. Well lets not cross that bridge till we get to it.

Package bees. We bought our first this season for an experiment, and put them on combs of honey and empty combs. The cold weather in May set them back so that we got very little clover honey from them, but they were in good condition for buckwheat and late honey of which they got their share. Our conclusion is that in our poorer years when clover prospects are poor that a three pound package arriving June first to fifth will be as profitable as the two pound package earlier. They can then build up on the summer flow and be ready for buckwheat and fall flowers.

Ordinarily I do not see how any one could afford to kill bees in the fall and buy bees from the south in the spring and make a living, as in this locality at least there would not be any profit in the deal.

And now the wintering problem comes up. We will pack as usual in our quadruple cases and mostly in double brood chambers, unfeeding as noted above, and if we have several flight days during the winter we do not anticipate any great winter loss, even with the brood chambers filled with goldenrod honey. We believe if the honey is well ripened as the late honey is this year there will be no dysentery even if confined several months as they are in this section.

I would like to say so long until the January meeting at Harrisburg but the chances now are that wife and I will take a turn thru the south to look up the package business.

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SECRETARY-TREASURER A. T. Keil, Mars, Pa.

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The program of the Beekeepers Meeting at Harrisburg follows these two paragraphs. Those attending have always enjoyed the meetings and obtained a lot of good from them. Your friends will be expecting to see you there so make your plans now to attend.

Final touches should also be made on your honey exhibit so that it will be in the best possible shape for the show. A copy of the premium list should be obtained and the rules read since there have been a few changes made over those of last year. Comb honey to show to best advantage should be wrapped in cellophane. If it is not wrapped it will soon become unsightly and dirty in appearance. If improvement continues as in past years we will see the finest honey exhibit ever.

ANNUAL MEETING

Pennsylvania State Beekeepers' Association
Room D, Farm Show Bldg., Harrisburg, Pa.
January 20 and 21, 1937

WEDNESDAY MORNING AT 9:30

Meeting called to order by the President—H. M. Snavely, 221 Walnut St., Carlisle, Pa.

Convocation—

Address of Welcome—Hon. J. Hansell French, Secretary of Agriculture, Pennsylvania.

Honey Krushed Wheat Bread—D. L. Burkholder, Sec'y-Treas., Lancaster County Honey Producers' Ass'n, Leacock, Pa.

Beekeeping as a Hobby—John S. Fleck, Pres., Allegheny County Beekeepers' Ass'n, 625 Kirtland St., Pittsburgh, Pa.

Sec'y-Treas. Report—A. T. Keil, Mars, Pa.
A Few Remarks—Sec'y-Treas.

WEDNESDAY AFTERNOON AT 1:30

President's Address—H. M. Snively, Carlisle, Pa.

Election of officers—

4-H Beekeeping and its Future—Mr. Geo. H. Rea, Ass't Prof. of Apiculture, Cornell University, Ithaca, N. Y.

Artificial Mating of Queens—Dr. W. J. Nolan, Apiculturist, Dept. of Agri., National Agr. Research Center, Beltsville, Md.

Marketing Honey—Prof. Edwin J. Anderson, Bee Specialist, State College, Pa.

Honey Candies and Honey Lemonade—D. C. Gilham, Hon-E-Nut Candies, Schuylkill Haven, Pa.

What Old Timers Think of the Pennsylvania State Beekeepers Ass'n—By Old Timers.

WEDNESDAY EVENING AT 6:30

Beekeepers' Banquet—Jackson's Restaurant, 208 Walnut St., 6:30 P. M.
Price: \$.75. Remember the good time we had last year.

Experiences of an Extension Specialist, Prof. Geo. H. Rea.



GEORGE H. REA

Swarming—Dr. W. J. Nolan.

Remarks—Visiting Bee Supply Representatives.

If it is possible to arrange, music will be supplied by some talented beekeeper or group of beekeepers.

The menu for the banquet will be as follows: Half Grapefruit, Celery and Radishes, Baked Country Ham, Candied Sweet Potatoes,

Buttered Green Beans, Rolls and Butter, Cherry Pie, Coffee.

THURSDAY MORNING AT 9:30

The Use of Beeswax in Making Candles—D. C. Babcock, Adv. Mgr., The A. I. Root Company, Medina, Ohio.

The Use of Honey in Summer Drinks—Enos H. Hess, Mechanicsburg, Pa., Sec'y-Treas., Cumberland County Beekeepers' Ass'n.

Nectar Secretion—Dr. W. J. Nolan, Apiculturist.

Answers to some questions asked by beginners whom I contact. Mr. F. W. Gravely, The A. I. Root Co., 148 Chambers St., N. Y. City.

Queen Breeding in Pennsylvania—J. B. Hollopeter, Queen Breeder, White Pine Tree Farm, Rockton, Pa.

How to Increase Honey Consumption—Jere C. Frazer, Mgr. G. B. Lewis Co., Branch Office, Wheeling, W. Va.

Extracting Equipment for the Honey House—Prof. Edwin J. Anderson.
Report from Counties getting appropriations from County Commissioners for Inspection.

THURSDAY AFTERNOON at 1:30

Report of Apiary Inspection in Penna.—H. B. Kirk, Apiculturist, Dept. of Agr., Harrisburg, Pa.

Winter Management—Prof. Geo. H. Rea.

Production of Honey from Package Bees—Rev. H. M. Snively, Carlisle, Pa.

Treating Bees for American Foulbrood—A. T. Keil, Apiarist, Treesdale Farms, Mars, Pa.

Beekeeping in the W. P. A. Educational Program—W. E. Davis, R. D. 1, Wayne, Pa.

General Discussion—How can we improve our Association.

Business Session.

IS YOUR COUNTY ON THE MAP ? ? ? ? ?

If not, why not? Surely there must be at least ten interested beekeepers in your County, enough to organize a County Beekeepers Association, and thus take advantage of the State Association offer of taking in County Association members at \$.50 each when there are 10 or more members from your County. Your Sec'y-Treas. is willing to give time and help, so are all the officers of the State Association and I know the County Agents will help if the beekeepers show an interest.

According to my records the following Counties are on the Map of Interested Beekeepers in Penna. If there is any errors or omissions call them to my attention and I will have it corrected in next issue of Penna. Beekeeper.

County	Members	County	Members
Allegheny	29	Lawrence	13
Berks	22	Lebanon	13
Blair	18	Lehigh Valley	18
Butler	14	Lehigh & Northampton	
Cambria	21	Luzerne	12
Centre	22	Monroe	10
Cumberland	19	Montgomery	12
Erie	22	Philadelphia	29
Fayette	27	Schuylkill	12
Lackawanna	13	York	45
Lancaster	19	Other Counties no Association	

The Counties having Beekeepers' Associations are to be congratulated in their fine showing, the officers and County Agents especially and it is appreciated by the State Association, however, consider the number of beekeepers in your County, and strive to at least double your membership in the next few months. Some of our new County Associations did not have any member in the State Association previous to starting an association, others one or two. A word to the Counties not having an Association "Go thou and do likewise."

—A. T. Keil, Sec'y-Treas.

NATIONAL MEETINGS TO BE AT WASHINGTON, D. C. NEXT FALL

By E. H. Sachs, Biglerville

During the last week of November the American Honey Producers' League, the Southern Conference, the Apiary Inspectors of America and the American Honey Institute met at San Antonio in a joint meeting.

The meeting was very well attended, as many as 450 being present at one session. Those present came from all over this country and a few were there from foreign lands. The foreign representatives were from Canada, Mexico and Bulgaria. Those from this country came from states as far distant as California, New York, Michigan, Iowa, etc.

The weather was fine for most of the meetings so that those who arrived from the snow covered states of the north enjoyed a real treat. Banana and palm trees were the most striking and unusual in appearance. The sight seeing trips to the zoo and the missions offered a pleasant diversion from the more formal programs of the meetings. A curio shop "The Buckhorn" which contains hundreds of trophies in the form of deer heads, elk heads, rattle snake rattles and what not attracted a great deal of attention. These trophies have been collected over a period of many years and contain many unusual developments, such as a rack of deer horns with 78 points, and Texas Long Horn steer with a horn spread of 7 feet 11 inches.

The subjects discussed at the meetings included a discussion of the disease resistant strains of bees which it is hoped will offer some means of controlling American Foulbrood.

A paper was presented by Mr. Lathrop of Washington, D. C., which told about the work being done there to determine the characteristics of certain kinds of honeys. The purpose of the work is to determine which kind of honey is best suited for the different commercial uses. For instance, Tupelo honey is used exclusively for golf ball centers since this honey will not crystallize.

Most important of all was the decision of the executive committee to hold the National Meetings at Washington, D. C., next fall. The fact that the meetings will be at Washington will make it possible for the beekeepers of Pennsylvania to attend. This will be the first opportunity our beekeepers have had to attend this meeting for many years. It is indeed an opportunity we cannot afford to overlook. Our representative of State College, E. J. Anderson, was elected a member of the executive committee of the American Honey Producers League.

Following the meetings at San Antonio a group of beekeepers made a trip into Mexico and obtained a bird's eye view of beekeeping and other conditions there. A side trip was made through the back country where natural conditions could be seen. Flowers of many kinds were blooming, beautiful butterflies could be seen here and there, and the foliage along the streams was beautiful. Bees were working as they do the year around on all days when it is not raining.

SWARM CONTROL

A book entitled "Swarming, Its Control, and Prevention," was written and published by L. E. Snelgrove, of Somerset, England. The book was purchased by A. R. Houser, of Center County, Pennsylvania. Mr. Houser thought it was very interesting and loaned it to me. I felt that the beekeepers of Pennsylvania might be interested in what it contained so I am writing a brief account of the method described in the book.

As a preliminary to the discussion on Swarm Control, Mr. Snelgrove urges all beekeepers to have their bees in good shape in fall, (1) heading each colony with a vigorous young queen, (2) providing ample stores, (3) having the hive clean and dry and draught proof, and (4) properly ventilated. He also mentions the fact that spring feeding to stimulate brood rearing if done be carried on not later than six weeks before the end of the first honey flow. He favors spring feeding to stimulate egg laying only during a backward spring when the bees are naturally slow about building up.

The conditions commonly considered conducive to swarming are listed as follows:

- (1) Lack of space for the extension of the brood nest
- (2) Lack of storage room for honey
- (3) Crowding of the brood nest
- (4) Insufficient ventilation
- (5) High Temperature

The author of the book feels that swarming is directly related to the emergence of brood. The egg laying of the queen in spring increases rapidly to a peak and then recedes. The result is that there are soon a large number of young bees emerging and a reduced amount of work to be done. At the same time nectar and pollen are coming in rather rapidly. The result is the colony quickly develops the swarming fever and begins building queen cells.

When a hive body is added in spring as additional space it is placed above the brood chamber and two frames of brood are taken from below and placed in it one on each side of the center comb. Two empty combs are placed below. Generally two bodies are left for brood rearing space. An additional shallow frame or section super is given the colony. Just before the first honey flow begins operation one should be performed with all normal colonies. Operation (1)—in the swarm

control program is to place the queen with one frame of brood and nine frames without brood in the lower hive body. A queen excluder is placed above this hive body, then the small super is placed on the queen excluder and the second hive body with most of the brood is placed on top. The one frame of brood placed in the lower body is put in the center. If more than ten frames of brood are left over for the top body the surplus frames are given to a weak colony and empty combs or sheets of foundation are used in their place in the colony being treated. The unsealed brood is placed near the center of the upper hive body and the sealed brood near the outside.

A special inner cover is made with a $\frac{3}{8}$ inch strip $\frac{3}{4}$ of an inch wide nailed around the edge of both the upper and lower side of the board. This inner cover is the same as the one we use except that it has the $\frac{3}{8}$ inch strip providing a bee space below as well as above the board. A wedge shaped piece of the $\frac{3}{8}$ inch strip about $1\frac{1}{4}$ inches long is cut out of the middle of the upper and lower surface on three sides. The wedge shaped pieces are to be removed and the space left to serve as entrances when needed. The hole in the center of the bee escape is covered with a wire screen.

Operation (2)—Three days after operation one place the specially prepared inner cover below the upper hive body, but above the honey super. Place it so the solid side faces the front of the hive. Remove the upper block or wedge of the inner cover on the right side of the hive. The bees in the upper body are separated from those below. They have the space provided by the removal of the small block as an entrance. The old or field bees will leave the upper body through this opening but will return to the lower because they were accustomed to the old entrance. The younger bees will use this new opening as their entrance. The bees in the upper body, because they are queenless, will begin to build queen cells.

Supers should be added as they are needed, Operation (3), on the seventh or eighth day replace the wedge on the upper right and remove the one below it, then remove the one on the upper left. The bees returning to the entrance on the right side will be forced to enter the lower hive and work in the supers. There will still be an entrance to the outside on the left side of the hive.

Operation (4)—On the fifteenth day replace the wedge on the upper left and remove the one below, then remove the upper one on the rear of the hive. About this time a queen will emerge from above and in a few days fly from the rear entrance to mate. A small colored lighting board will be of advantage if placed immediately below this entrance.

Sometimes a queen will fail to mate and return. To take care of such colonies a few queen mating hives with nuclei should be on hand so that queens can be reared there to replace the queens lost.

The method described above will prevent swarming during the period of an ordinary honey providing if there are no queen cells in the hive at the time of Operation (1).

If queen cells are present in the hive when operation (1) is performed certain differences in management must be carried out.

Instead of placing the queen below, place her in the upper brood chamber and be sure there are no eggs or young brood in the one comb of brood placed in the lower body. The queen excluder should be placed under the upper hive body rather than below the supers. Later the same day the special inner cover should be placed below the upper body

when the queen excluder may be put down next the lower hive body. One of the upper wedge shaped blocks should be removed so the old bees can go back to the lower body.

As soon as the bees have destroyed all the queen cells above which is generally within a week, the queen and a frame of brood are placed in the lower body.

Operation (3) should be performed in five instead of seven days and operation (4) should be delayed until 14 days after the queen was placed below. If queen cells should be present below they should be destroyed when the queen is placed in the lower body.

Sometimes a colony is persistent and will not tear down the cells above. In this case the upper body with the queen may be moved to a new stand some distance away for a few days, then be returned to the old colony.

A more accurate and comprehensive discussion of this method may be obtained by purchasing the book. The title is "Swarming, Its Control and Prevention" by L. E. Snelgrove, Purnell and Sons, London, England.

—E. J. Anderson.

BEEKEEPING AS A HOBBY

By H. M. Snavey, President

I believe everyone has a hobby, or some side line vocation, which he follows. I think everyone should have not only a vocation in life but also an avocation; that is something to divert from the regular routine of daily life so as to give recreation. Furthermore, I think that this avocation should be something worthwhile. Walt Mason once said that most of the championships won are in things that do nobody any good, such as champion flag-pole sitters, marathon dancers, etc.; why not have some champion wood-splitters or corn huskers, or perhaps beekeepers. Well this article has to do with beekeeping. I am not going to tell anyone just what his or her hobby should be, but I would advise those who do not have any to try beekeeping and see how profitable it will become.

All ministers have a hobby, there is no question about this. I always had one. Only in recent years, however, has it turned over into beekeeping. I read some about bees for many years, and always had a very keen desire to go in for it, but eventually when I started I didn't then realize that it could be made as profitable as it has turned out to be. I started with two colonies at first, and in the following spring one robbed the other, so I had one left. That spring I increased by buying several packages of bees from the South and several swarms. From that time I have made a little increase each spring until last season I had twenty-eight colonies, and took care of six for another person. My entire crop for last season was thirty-two hundred pounds; of this about six hundred and fifty sections of comb honey.

I began beekeeping as a hobby, but it has amounted to a little more than that as time goes on. I am pastor of a church and am kept busy most of the time with parish duties, yet a few hours each week spent with the bees has given me a most delightful recreation and has also provided a little supplement to the income; besides it has furnished our household with all the sweetening we needed.

On the matter of using honey to sweeten I should like to say just this: During the last year we used very little sugar. Honey is our main

sweetening for everything, preserves, canning, cooking, baking and table use. When folks are with us for meals we, of course, have sugar on the table; but we usually explain that we use honey, and almost in every case the guests do the same. We use extracted honey on cereals all the time. Mrs. Snavelly follows the recipes in 100 Honey Helpings, American Honey Institute, and those appearing in The Pennsylvania Beekeeper October 1935. The beekeeper, of all families, should use lots of honey.

Some folks have asked me, how do you find sale for your product? There is no trouble here. We sell to the bakers, stores and roadside markets. One such stand alone has handled over five hundred pounds in five months.

In closing I might say that it is not only a pleasant pastime for me, but several others have started the game when they saw the results in my home. That is one reason for writing this article. When once the fever gets hold of a person the only cure that I know is to get a colony or two of bees. Stings? Of course, but what of that? One can easily stand a few stings for what he gets out of it. There isn't anything that you can undertake without getting with it some unpleasant experience, and one soon becomes immune to the effect of bee stings. For the beginner there is always the various safe-guards against bee stings which are provided and sold by supply houses, so if he uses these he need not be nervous about it. Beekeeping is a hobby that pays.

GARDEN SPOT NEWS

By W. O. Hershey, Lancaster, Pa.

A Review of 1936 Elevation 400 ft.

Spring opened with beekeepers on a guess. Upon examination we found about 10 per cent dead, added to this was about 6 per cent spring loss and some weak colonies.

Fruit bloom came along with very nice weather and bees had a fine chance to make headway, but it seemed they made little headway probably because of the reduced number of bees. Then came the tulip poplar about 10 days early which gave us a very nice flow. Of course, colonies that were light in bees could not take proper advantage of this flow since this nectar is gathered mostly by wintered over bees. Then came clover in all its glory about 10 days early, but the weather was very dry. The alsike clover grew as high as the wheat stubbles and dried up. The other clovers suffered the same fate. At the end of June when the hive on scales should have gained 100 pounds it had advanced only 25 pounds and the honey was mostly in the food chamber. This put the morale of beekeepers at about zero, I myself went back to the trade. I worked about three weeks and things began to look better and we had to add another super, then by the middle of September the hive on scales had advanced to 100 pounds. Not so bad after all and this after thinking we had a failure. The honey I think was gathered mostly from alfalfa, probably 25 per cent was from the goldenrod. This is the first time that we have had alfalfa honey in Lancaster County. It seems that the dry weather in June was the right condition for alfalfa. It also seemed that on every farm there was a field of alfalfa for the first time. Two weeks after the alfalfa was cut it was up in bloom and stood for ten days to two weeks before it was cut. There were in most fields four cuttings. This kept bees jumping from

one field to another. The alfalfa honey is of a light amber color and has a nice mild flavor. At no time do I think that we got over two pounds in one day.

The local market is fair according to the amount of work we do as this is a section where white honey is preferred. The light amber does not appeal to most customers as much as the white honey. We are still holding quite a bit of honey.

We have enjoyed a fine fall flow, and bees are in fine shape for winter with plenty of stores. We are trying to put the bees away in the best possible shape we know how. In two-story hives with two entrances well packed on top and windbreaks with heavy stores. As the bees have stood by us all through the lean years we should be willing to do something for them. Also remembering that we only take out of a business what we put in it regardless of what it is. Bees are no exception. All and all we had a pleasant and profitable year. We are looking ahead for another spring.

LACKAWANNA COUNTY NOTES

By Robert Burdick, Secretary-Treasurer

Through the efforts of Mr. Howard Miller, Mr. E. J. Anderson, Extension Apiarist of State College, Mr. S. R. Zug, County Agent and other Beekeepers, a meeting was held in the Scout Room of the Waverly Community House on June 1st, 1936.

Numerous subjects of interest to the beekeepers were discussed and explained by Mr. Anderson. There were also picture slides shown of interesting Beekeeping subjects.

It was decided to form an organization known as the Lackawanna County Beekeepers Association, yearly dues of \$1.00 which includes membership in the Penna. Beekeepers Association and subscription to "The Penna. State Beekeepers Association and subscription to "The Penna. Beekeeper."

The following officers were elected:

President—Howard Miller, R. D. No. 1, Clarks Summit, Pa.

Secretary-Treasurer—Robert Burdick, 66—42d St., Carbondale, Pa.

LEHIGH COUNTY NOTES

By Mrs. H. W. Dennis, Allentown

The last field meeting of the season by the Lehigh Valley Beekeepers Association was held on November 5 at the apiary of William S. Weaver, orchardist, near Macungie, Pennsylvania. Packing for winter was demonstrated by Mr. E. J. Anderson of State College.

Miss Florrie Bishop Bowering, nationally known authority on Home Economics, gave a one-half hour broadcast on Honey and Honey Recipes over our local station WCBA, Allentown, November 20 from 2:30 to 3 p. m. Miss Bowering broadcasts the Mixing Bowl Program daily during the same time except Saturday when she is on the air at 10:00 A. M. The Wednesday lesson is a public cooking class and is on for one hour. We were quite pleased to hear the interesting broadcast and considered it generous of Miss Bowering to devote the full period to honey.

The manager of the Nancy Ann Candy Kitchen of 2210 Main Boulevard is interested in making honey candies. The display by the Association at the Allentown Fair was an inspiration to him and many others who are still commenting on its attractiveness. While the bees are resting from their labors the beekeepers are busy disposing of their products. In behalf of the Lehigh Valley Association we extend to all the readers of the Pennsylvania Beekeeper best wishes for a most joyous Holiday season.

MONROE COUNTY BEEKEEPERS ASSOCIATION

The Monroe County Beekeepers' Association was organized in April 1932. This Association annually sponsors two or three County-wide Field Days, a tour and a Picnic. The Board of Directors for 1936 are as follows:

President—Roy K. Howell, Saylorsburg, Pa., R. No. 2

Vice-President—Harry C. Kautz, E. Stroudsburg, Pa., R. No. 1

Secretary-Treasurer—Arthur E. Ifft, Stoudsburg, Pa.

John A. Learn—Tannersville, Pa.

Charles R. Gurr, E. Stroudsburg, Pa., R. No. 3

Van H. Kaul—E. Stroudsburg, Pa., R. No. 2

Fred Anglemire—Bartonsville, Pa.

George K. Brands—Stroudsburg, Pa., R. No. 1

Van D. Yetter, Jr.—E. Stroudsburg, Pa., R. No. 2.

TIOGA COUNTY NOTES

By Walter Doud, Mansfield

The season of 1936 has not been much different from other seasons. Clover honey flow started out good but was cut short by dry weather. It was the hardest season we have ever experienced to rear and mate queens. For some reason they just did not mate and start laying.

Fall flow was exceptionally good and colonies went into winter quarters heavy with honey and young bees. Goldenrod honey is not the best for winter feed in our experience, however, if bees get a flight during winter months they come through in good shape. It is safer to feed some sugar syrup in fall.

While going over the bees at one out-yard last spring, I saw two queens on one comb, both were laying. The older queen did not seem to be failing, she was plump and active. I held the comb and watched them several minutes. Twice I saw them so close together that their wings brushed each other. Both were pure Italians. I replaced the comb, leaving both queens on it. At a later inspection in about 10 days, the older queen was gone. This was a two-story, eight frame colony. Do bees know better than we do when they need a new queen?

It was my pleasure and profit to attend the Nauvoo 4-H Bee Club round-up. The average production per colony for all members was 170 lbs. High colony was 330 pounds, which I believe is high colony for state in 4-H Club work. The display of honey was very good and the boys and girls are much interested in their work as well as their parents. There was a good crowd at the round-up and fine entertainment by the youngsters.

Honey is selling the best of any years since I have been producing it, and think it will all be sold before spring.

Now that hunting season is over I expect to have more time to work at my winter jobs, cleaning and repairing equipment, etc. Also want to build a new road side stand. The one we are using has served us well,

but it was not built intending to use it as a self-serving stand. Three seasons have given me some experience, so that now I have different ideas and would like to try a little different type stand than the present one. I believe it would pay any beekeeper living on a main road to try using a self-serving stand. We have had very good success, not any great amount of honey sold. Some days as much as \$7.00, but very little effort is put forth to sell it.

Oh! By the way, I got an eight-point buck.

(Congratulations Walter on your beekeeping and hunting ability.—E. J. A.)

CHRISTMAS COOKIES

Mix 1 pound lard, 2 cups sugar, and 1 quart honey. Melt over hot water but do not allow to boil. Beat well. Cool. Add 2 cups chopped nuts and 2 cups chopped raisins. Mix and sift 5 quarts flour with 5 teaspoons cinnamon, 2 1-2 teaspoons cloves, 2 teaspoons soda and 1 teaspoon salt. Add alternately with 2 cups sour milk to the first mixture. Chill in refrigerator over night. Roll thin and cut out. Place on greased baking sheets and bake until delicately browned at 350 degrees. Store in air-tight jars. If desired these may be iced and sprinkled with colored sugar.—Mrs. A. T. Keil.

The Publishing Committee wishes to thank again all those who assisted in making the "Pennsylvania Beekeeper" what it was for 1936. Without the whole hearted support of the beekeepers this publication would be impossible.

LUZERNE COUNTY NOTES

By Leonard E. Good

In the past months the beekeepers have organized and are now working together as a unit under the Luzerne County Beekeepers Association. Robert Johnson, Drifton, Pa., is president and Leonard E. Good, secretary. Everyone thoroughly enjoyed the meetings. They were well attended. Regular inspections, better markets and educational work are the aims of the members. They appreciate the untiring efforts and generous advice of Mr. J. D. Hutchison, the county farm extension representative, and Mr. E. J. Anderson of State College.

There has been an exceptionally heavy and steady honey flow this year. A fine quality of clover and buckwheat honey was produced. Many of the apiarists have reported sold out. Only a small amount of unmarketable honey remains this year.

More beekeepers have packed their colonies this year than before—thanks to Mr. Anderson's kind instructions.

The package bees did very well this year. In introducing them during April, only a few losses were reported.

IN MEMORY OF H. M. MOYER

By his daughter, Helen Moyer

Mr. H. M. Moyer died March 23d, 1936. He was aged 82 years, 11 months and 7 days. He was born April 16th, 1853. From childhood on he was very interested in bees and honey. When he was 21 years old he ordered a swarm of bees in the spring and in the fall of that year he went and fetched the hive of bees. At that time they did not have the knowledge how to handle bees like now. So to move the box of bees they wrapped it in a sheet. A good way to invite stings I think. But that was the way he got started. He was interested in trying out new methods. So he improved gradually until he had a modern apiary.

Up until his death he was active in the bee business. He had decreased the number of hives the last couple of years but he still had 36 hives of his own and helped a few neighbors. He got Gleanings in Bee Culture from the time on that he had bees, and before that, I think the bee paper was printed one year before he was a regular subscriber, and after more Bee magazines came on the market he took advantage of them. He also joined the local bee association too. He was a close follower of A. I. Root habits of keeping bees and other successful bee men. He came from a family that was very rheumatic. But he never knew what it was. So he gave the bee stings credit for being free from rheumatism. He always said he kept bees for money, health, and pleasure. If you enjoy your work it is easy to do, and Mr. H. M. Moyer always took much interest in bees. So the work at bees was a pleasure for him.

The last 16 years of his life he spent the winters in Saint Petersburg, Florida, as the bees did not need his attention in winter, but in summer time he gave the bees his first time.

We are very sorry to learn of the death of Fred Grimshaw, November 5, 1936, of North East. Mr. Grimshaw has been quite active in beekeeping work and his absence from the meetings will be very much noticed.

BRADFORD COUNTY NOTES

By Harry W. Beaver

Busy times are here again, or yet. I haven't figured out just yet if, as we get older, we get slower or if we just get more work started than we can get done. At any rate we manage to keep busy.

For several years we have been using the carbolic-salt solution recommended by Mr. O. C. Fuller, of Muncy, Pa., for prevention of A. F. B.

Well, we have been having a little of it cropping out all the time, so we concluded to let the medicine drop and did not use it after mid-June, this year. In August we made our thorough inspection and discovered upwards of 180 colonies slightly affected with A. F. B., which we promptly disposed of and I just finished rendering the combs into wax, many of them nice white ones that never had brood in them, but we considered it best to make a clean sweep. Now then, did the medication of the colonies inhibit the growth of the disease or did they get it from outside, also will others show disease next year. I will say that most of these colonies had only a few cells in one or two combs.

We will have to put up somewhere about 8000 frames of foundation for replacing those we melted up, which means considerable work and all on account of A. F. B. Question: Would beekeeping be benefited if there were no brood disease, or would we be poorer beekeepers?

Bees here had a partial flight December fifteenth, but not in the higher land round about here. We have several yards at around 2000 feet elevation that do not have a flight from November till March which do not winter so well but which build up in time for the clover flow. and when the season ends we find have stored as much surplus as any we have.

I have looked the program over for the January meeting and it looks as if you who attend will be well repaid, but wife and I will soon be wending our way to enjoy the mild climate of the southern states.

We plan on seeing the beemen of the middle south on the way down, taking in the mid sections of Mississippi, Alabama and Georgia, maybe will get to Louisiana. So here is hoping that you all have a fine time at the convention and that we have a fine time too.

Since 1869

—The beekeepers from every state and hamlet in our fair land, from coastal cities on distant shores or from cities far inland reached only by pack trains, where strange languages are spoken, have always thought of Root's at Medina as the source of the best, not only in beekeeping equipment, but for information.

Since 1869

—There has been developed by Root's an enviable list of inventions and improvements that have made beekeeping more profitable—the foundation mill, the radial extractor, the locked-corner frame, and improvements too numerous to mention.

Since 1869

—The name Root Quality has been a guarantee to the beekeeper of the **"BEST BY THE BEE TEST,"** not only in material but in design and accuracy.

Since 1869

—The policy of Root's has been to give full value for the price, and now after 67 years in marketing a line of bee supplies known around the world for satisfaction and economy, we are still the leader.

BECAUSE the beekeepers of the world have given us their patronage. Our proud heritage is your guarantee for the future.



THE A. I. ROOT CO.
MEDINA, OHIO



**End of
Volume**